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# JOURNAL

of the Medical Association of the State of Alabama

JULY, 1979

49 #1

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## Malignant MELANOMA

PAGE 31



# A character all its own.

Valium (diazepam/Roche) is a benzodiazepine with a character all its own.

Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

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The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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## From the Executive Director

### THE NHI CHESS GAME

President Carter's entry into the NHI derby was a long time in coming.

When he finally did propose the plan he had promised way back in the presidential campaign, it was a balancing act that did nothing to silence Senator Ted Kennedy and the labor supporters of his bill. On the other hand, it certainly didn't give any comfort to those believing that *any* NHI bill would be fiscal suicide for the country.

Obviously, the issue has become a political pawn between the President and his severest Democratic critic, Senator Kennedy. That being the case, political pundits tell us, the President saw a chance to throw in his lot with Senator Russell B. Long, the Louisiana Democrat who chairs the powerful Senate Finance Committee.

Long, considered the key to any Senate action on NHI, has been opposed to anything but catastrophic national health insurance. He had let it be known that he would go no further this year than support \$5 to \$7 billion worth of insurance for catastrophic illnesses that outrun ordinary health coverage.

But there must have been some behind-the-scenes action between the White House and the Louisianan's office. For hardly had the President's plan hit the streets than Long declared he just might go along with it, even though its minimum cost would be three or four times as high as his previously announced ceiling.

This declaration caught Washington somewhat by surprise, but Long is a wily tactician and, it is said, he may retreat from a position that seems to have more presidential politics in it than real conviction. For all that appears, he and the President have conspired to freeze out Kennedy and the supporters of his cradle-to-the-grave bill that promises everything to everybody.

But all this seems mainly for show. Most of the congressional power brokers, such as House Ways & Means Chairman Al Ullman, say there won't be any NHI bill passed in the current session. The Carter-Kennedy stand-off appears to be that kind of political chess that goes on in the political maneuvering leading up to a presidential election.

One of the nation's more liberal newspapers, *The Washington Post*, took a hard look at the two basic approaches to NHI, total coverage vs. catastrophic coverage, and concluded that the first would be "uncontrollably expensive" and the second, by pouring "unlimited resources into the

*continued on page 4*



Luther L. Hill, M.D.  
President

# Tort Reform

The Threat of unjust and sometimes frivolous malpractice claims is of constant concern to all members of the medical profession.

Frivolous law suits are, in fact, of increasing concern to all segments of our society. To remedy this is a challenge, not only to the medical profession, but to the legal profession as well.

Many responsible members of the bench and bar recognize this and support the principle of tort reform.

Attorneys, in general, are honest and conscientious. Their dedication to justice for their clients may be outstanding and the service they render in obtaining this justice is most commendable.

By far, the greatest majority will not assert a claim which they believe is not supported by fact. They have a code of ethics which is analogous to our medical code of ethics.

There are only a few who would accept baseless claims knowingly and with malice, and these are an embarrassment to the legal profession. They are like cancers which destroy the dignity and respect which their brothers deserve. Unjust law suits, knowingly undertaken, represent the most flagrant form of legal malpractice.

The Citizens' Tort Reform Commission is a coalition of individuals, associations and other organizations interested in correcting flagrant abuses of the judicial process in Alabama.

There is a drive in many sections of the United States to change the tort system.

An example of one relief from a baseless lawsuit appeared in a *Forbes* report on August 7, 1978, and May 28, 1979, on what may be "probably a legal first." A New York dentist sued Dow Jones & Co., and the editors of one of their publications, *Barron's*, charging that the financial weekly had used its columns to depress the price of a listed stock the plaintiff owned. This original action was thrown out of court, whereupon the defendants' (Dow Jones & Co., *et. al.*) lawyers counter-attacked with a suit demanding that the plaintiff (the dentist) and his attorneys repay the costs of the defendants.

"Judge Robert L. Carter of the United States District Court for the Southern District of New York backed the plea ordering the plaintiff and, more strikingly, his lawyers, the prestigious Boston firm of Hale & Dorr, to pay \$50,000 to *Barron's* and the other defendants."

"Singling out Gordon Walker, the Hale & Dorr partner who handled the case, (Judge) Carter stated that 'counsel knowingly and with malice began this baseless lawsuit.'"

Malpractice insurance costs will be reduced when trivial and unjustified suits can be eliminated.

The recent drive for tort reform addresses this elimination of trivial and unjustified suits. At this writing, there are several bills before the Alabama Legislature which, if passed, would help reduce these baseless suits.

A physician who talked to his legislator about these bills is helping himself, his fellow physicians and, most important of all, his patients.

*Luther Hill*



continued from page 2

most extreme cases. . . would skew American medicine from the routine care and prevention that, for the population as a whole, promises the greatest benefits."

Carter's plan, *The Post* declared, is a compromise. Does that mean that it would embrace the weaknesses of both — that is, cost overruns and misdirection of limited national resources?

*The Post* didn't say. And that silence is fairly typical of those who might tend to favor NHI, as the newspaper seems to. They think something ought to be done, but then turn around and say that all approaches fail.

The idea they seem unable to entertain is that here is another problem, to the extent it is a problem, for which there is no federal remedy that won't make the problem worse.

*Lon*

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**Warnings:** Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies

before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

**Precautions:** Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

**Adverse Reactions:** Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin.

(102175)

\*Equivalent to penicillin V.

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Please see BRIEF SUMMARY on following page.

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**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlordiazepoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With over-dosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. *G.I.:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia; arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adcnopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

## DIGEST OF ACTIONS OF THE STATE COMMITTEE OF PUBLIC HEALTH

*The State Committee of Public Health took the following actions at its meeting on June 20, 1979:*

- Was advised on the failure of the Federal Agency to designate the State Board of Health as the State Health Planning and Development Agency beyond the 36 months conditional designation authorized by statute. Is cooperating with the Governor's office for an orderly transfer, and an uninterrupted Assurance of Need program, to a location designated by the Governor. Emergency Medical Services and certain construction will remain with the Department.
- Considered a request for birth and death certificates for an infant mortality study in HSA II and approved release to the District Health Officer with certain assurances of confidentiality.
- Considered a request for a special study on Cancer in the Huntsville area and requested additional information and a protocol.
- Considered a request from DHEW to report abortions from hospitals and took note that the Legislature had considered this issue on three separate sessions and had not authorized this type reporting.
- Approved initial issuance of Assurance of Need for 11 health facilities.
- Approved the establishment of eight dialysis stations at D. W. McMillan Hospital at Brewton.
- Heard testimony on requests from Mobile for four revisions, two dealing with Springhill Memorial Hospital and two dealing with Doctors Hospital, Mobile.
- Denied a request from Mt. Royal Towers in Birmingham with adverse findings and recommendations for a revision of the Medical Facilities Plan for construction of a 76 bed nursing home under Section 1122, Assurance of Need.
- Approved a change in the Medical Facilities Plan to add 55 additional beds for Coffee County as a request, based on justification, made by Enterprise Nursing Home.
- Approved a request from Trenholm State Technical College for an independent pilot training program for Emergency Medical Technicians/Paramedics in Montgomery, upon recommendation of the State Emergency Medical Services Advisory Board.
- Was advised of the identification of four new hypothyroid babies.
- Was advised of the identification of the 37th patient with PKU during the month.
- Received reports on the following: oyster relaying in Mobile Bay; air pollution news releases; and a progress report on DDT.
- Approved Perinatal Advisory Committee appointments for the Council on Prevention of Disease and Medical Care and authorized support for a \$250,000 request for perinatal care from the Special Education Trust Fund.
- Was advised of the appointment of Mr. Charles Loftin of Mobile as Chairman of the Council on Health Costs, Administration and Organization.
- Was advised on the reappointment of Mr. Paul B. Krebs as an engineer member on the Council on Animal and Environmental Health for a new term and appointment of Dr. Paul Schnurenberger for a five-year term, representing the Alabama Veterinary Medical Association. □



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Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

## Vasodilan—compatible with concomitant therapy

Vasodilan has not been reported to affect the treatment of coexisting disease; it is compatible with such drugs as hypoglycemics and miotics.

## Vasodilan—compatible with your total regimen for vascular insufficiency

Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

**\*Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease

Final classification of the less-than-effective indications requires further investigation.

**Composition:** Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

**Dosage and Administration:** Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

**Contraindications and Cautions:** There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

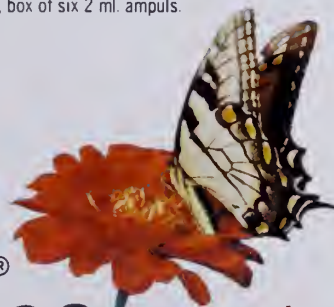
Intravenous administration should not be given because of increased likelihood of side effects.

**Adverse Reactions:** On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted. Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

**Supplied:** Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836



# VASODILAN<sup>®</sup> 20-mg tablets

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**20 mg q.i.d. recommended dosage**

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**Precautions:** Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

**Adverse Reactions:** Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.

**How Supplied:** Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Liquid in bottles of 1 pint and 1 gallon.

See package insert for complete prescribing information.

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# HMOs: The Jury Is Still Out

After full discussion at the annual meeting in Birmingham in April, the College of Counsellors and the House of Delegates directed the writing and dissemination of an informational article on Health Maintenance Organizations (HMOs). The following, while not an exhaustive treatment of a complex subject, was approved by the Board of Censors June 20 as fulfilling the Birmingham mandate.

Health Maintenance Organizations (HMOs) are new only in the name, which was coined nine years ago by the physician who has become the national evangelist of HMOs, Paul M. Ellwood, Jr., M.D., who heads a medical think tank called InterStudy, located on Christmas Lake in the suburbs of Minneapolis, Minn.

Dr. Ellwood, 53, got the attention of the Nixon Administration by brandishing a copy of *Fortune* magazine for January 1970, which had an article on the concept. The catchy (and perhaps misleading) name for prepaid medical care was his, but HMOs, by whatever name, have been around at least since the early 1900s.

The more famous ones, Ross-Loos and Kaiser-Permanente, have operated successfully in western states for decades, and the latter has long operated in Hawaii as well. The Group Health Cooperative of Puget Sound has been in operation for 32 years. There are other examples of longevity.

The most notable of current industry-sponsored HMOs may be those in Winston-Salem, N.C. (R. J. Reynolds) and Rochester, N.Y. (Eastman Kodak, Xerox, Sybron, General Motors), but there are others, some not properly so-called HMOs at all.

Some major American companies support or operate, like a company store, a variety of alternative health systems this side of the pure HMO. Gillette, for example, introduced a program for its Boston employees more than 25 years ago that is really an Expanded Industrial Clinic.

## By Degrees

The Expanded Industrial Clinic is generally accepted as the first and least revolutionary of the alternative health care delivery systems now being considered by some large corporations in their quest for health cost economies. The second is the Insurer-Physician Health Plan. Next, the Health Care Alliance; and, finally, the HMO, which may or may not be federally funded, itself subdivided into two types, the Individual Practice Association and Prepaid Group Practice. (The only HMO presently

listed as being in Alabama is of the second type. It is located in Birmingham.)

The current interest in HMOs stems from the intensified support of the Carter Administration. HEW Secretary Joseph Califano has been urging business to look into the putative financial advantages of HMOs. (Under P.L. 93-222, businesses are required to offer their employees the opportunity to join a federally funded HMO if specific conditions are met.)

He or Dr. Ellwood has apparently sold at least one important group of American businessmen, the Chamber of Commerce of the United States. The Chamber's Foundation last year published a major work, a kind of how-to-do-it health care for businessmen, *A National Health Care Strategy*. Available in handsomely printed kit form, it consists of four books, including those on planning and regulation as well as various alternative health systems.

The lavish Chamber study, conducted by Dr. Ellwood's InterStudy, urges consideration of all alternative health systems, believing, as it says, that *competition* is more effective than *regulation* to reduce health care costs, one-third of which industry now pays. The Chamber study lays this predicate:

"A market-oriented health care system will operate more like a typical industry — where efficient, effective, firms survive — rather than like a noncompetitive public utility in which inherent incentives tend to increase rather than decrease costs."

The American Medical Association, which for years categorically opposed HMOs, has moved to a position described as cautious endorsement. In a few localities, medical societies have formed their own HMOs.

If Dr. Ellwood, who coined the HMO label and spreads the gospel, can be accepted as the ranking authority, the 203 HMOs now serving some 7,000,000 Americans vary rather widely in quality, acceptability and availability.

Dr. Ellwood is most concerned that the Carter Administration has moved toward regulation of health care, when the current move in Washington was toward deregulation in other sectors. This could hamper the current HMO boomlet in its period of largest investment and growth, before market forces have been given a chance, Dr. Ellwood fears, since HMOs often require heavy initial capital outlay and deficit spending in the early stages.



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If regulation comes, it would be another one of those bureaucratic ironies of the federal government working to defeat itself — for it was Congress that passed the HMO act in 1973 and the Carter Administration that has given the idea its biggest boost. Hospital price controls during this period might have serious consequences to HMOs in the formative stages, Dr. Ellwood believes.

Not all HMOs receive federal money, although in the past five years Washington has laid out \$110,000,000 in grants and loans to help new HMOs get started and to make up deficits until they enroll enough members to support themselves.

### Some HMOs Skimp

The most serious criticism yet leveled against HMOs appears to be the charge of skimping on medical care. That happens, it is charged, when the accountant viewpoint surmounts the medical viewpoint; when cost control gets the upper hand over quality control. Nor have HMOs been entirely free of outright fraud, as happened on a grand scale in California several years ago.

Although there are many older HMO communities, the one to watch may be the twin cities of St. Paul-Minneapolis, where there are seven (going on eight) serving one person out of eight in the population. They are as competitive, according to *Money* magazine, as gas stations.

In just seven years, the proportion of the area's 1.9 million inhabitants enrolled in HMOs leaped from 2% to 12%, with major companies vigorously encouraging the trend. The Hennepin County Medical Society, which represents most physicians in the county that includes Minneapolis, set up its own HMO, the Physicians Health Plan, in 1975.

In the South, such HMOs as have made their appearance tend to be staffed by young doctors, women and foreign medical graduates, according to *Money*.

Although some HMOs have been highly praised by patients, others have plainly rationed both the quality and quantity of service they provide, driving patients away with what *Fortune* (which otherwise praises the concept) calls their "niggardly" ways. The long established HMOs aside, it is difficult to assess the overall quality of those that have been formed in recent years, although the evidence suggests that quality is uneven.

Even some favorably disposed observers warn of the dangers down the road when HMOs become entrenched, no longer fired by the competitive spirit and thus no longer an "alternative" but the new status quo. Will they then slip into monopoly abuses as has happened in other industries once they have a lock on the board?

### Price War

Just recently, the charge has been raised in the St. Paul-Minneapolis boom town of "cutthroat competition", "underpricing", and other pejorative terms hitherto associated with highly competitive businesses in a turf war. Some physicians, and businessmen as well, fear the consequences of all this, although the Twin Cities are all but unique in the present HMO experience, if only because of the proliferation and intensity of competition.

In a typical case, an HMO has slow initial growth, according to *Fortune*. Then it achieves a momentum once it reaches a kind of critical mass, particularly if it has the support of total business and industry. Beyond that, no one is really sure what will happen. Does an age-old principle of business, keeping many suppliers scrapping among themselves to control prices and quality, apply to medicine as "it does to the purchase of bushings and ball bearings," as one business writer suggests? Or is the distinguished medical teacher, award-winning author and President of Sloan-Kettering, Lewis Thomas, M.D., nearer the truth when he sees the heady enthusiasm behind HMOs as perhaps reckless, "...spreading [them] across the country like post offices, ready to distribute in neat packages, as though from a huge newly stocked inventory, health."

Many HMOs report marked reductions in hospitalizations among their enrollees but there are charges that the 30% to 60% claimed reductions may be more apparent than real. For every 1,000 patients under the age of 65, HMO advocate Dr. Ellwood says, 350 to 450 hospital days is about right. "If it's less than 300," he says, "they're skimping." And some are well below 300.

How is an individual patient to know whether the decision not to admit him to the hospital is based more on economic criteria than on purely medical ones, as in the traditional fee-for-service system?

To counter the perceived evil of overutilization under fee-for-service now comes the new one, in the view of some of HMO critics, of underutilization. Is this health maintenance or the reverse?

Is it preventive medicine to cut corners on marginal or even plainly indicated hospitalization to keep the profit & loss sheet in the black?

Such doubts as to which consideration is controlling may not be one of the most comfortable thoughts to sick people.

Admittedly, some of the criticism of HMOs is biased but it cannot be dismissed out of hand for that reason alone. There are those who merely say of the current government enthusiasm for HMOs as the economic panacea that the perversity of Murphy's Law will surely prevail: If anything can

go wrong, it will. In some cases, it already has, as the sad experience of some communities demonstrates.

In 1978, there were no HMOs listed in the sister states of Georgia, Mississippi, and Tennessee, but there were seven in Florida (Clearwater, Daytona Beach, Jacksonville, three in Miami and another in North Miami Beach). The greatest concentrations were in the Northeast, Upper Midwest and on the West Coast.

## Moving South?

However, the proselyters have not been idle in the South. In May 1979, a public hearing on a feasibility study for an HMO in the Calhoun/Etowah County was held in Gadsden. The proponents didn't even bother to attend to answer the questions of the opponents. Other efforts are said to be afoot in some other densely populated areas of Alabama.

At first, prepayment premiums in HMOs are higher than conventional insurance, but it is claimed that these level out over the years and that future increases are smaller because of ever-present and pervasive cost consciousness.

Most HMOs do not offer the patient a choice of physician, and minimize his other choices as well, in return for "total medical care" for a fixed fee. Some people like the system, while others don't, complaining of depersonalization, long delays for elective physicals and even, on occasion, acute illness. Patients have also been heard to complain of hurried consultations with unfamiliar doctors, whose salaried time is tightly allocated on the cost sheet in the front office.

There are many variables that may determine the success or failure of HMO location — area and population to be served, socio-economic profile, demographic trends, types of business and industry supporting the economy, satisfaction or dissatisfaction with existing medical care, etc.

*Fortune*, although viewing the HMO experiment with obvious approval, seems to have some reservations about the trendy enthusiasm of the movement, being led, as the magazine observes, by evangelists like those medieval monks who sallied forth from their abbeys to reform the church.

Although many reputable business and industries are betting heavily on HMOs, or planning to, there are some vocal doubters, men of substance who have seen many another sure thing pass and be forgotten.

Make haste slowly, they counsel. But the mounting burden of employee health care is so heavy, the belief that HMOs are an idea whose time has come is gaining ground rapidly in corporate boardrooms, national business journals report.

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### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity or idiosyncrasy to the sympathomimetic amines, glaucoma, agitated states. Patients with a history of drug abuse. Ouring or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy.* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children.* Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in the morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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References: 1. Citations available on request. Medical Research Department, MERRELL RESEARCH CENTER, MERRELL NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs. Florence, Italy, Jan. 20-21, 1977.

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\*PATIENT CARE Magazine—Outlook 1977 "Face-Off: Cost Containment vs. Chaos," January 1, 1977.

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

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(2) **Categorical.** Categorical programs are offered in medicine, surgery, obstetrics/ gynecology, pathology, pediatrics, physical medicine, and family practice. The majority of the 12 month period is spent on the service concerned or in related areas and is considered by most of the appropriate specialty boards as the first year of residency training.

(3) **Categorical diversified.** These programs are essentially a combination of the above two and are offered in radiology, psychiatry, neurology, and anesthesiology. The primary emphasis is upon the major specialty with additional required and elective rotations on other services.

To find out more information concerning this program, the eligibility criteria, service obligation, benefits and application procedures contact the AMEDD Personnel Counselor serving your area.

**Deadline** for applications is **1 September 1979**. All applicants are encouraged to also participate in the NIRM. Sections for the Army FYGME Program will be announced in sufficient time for selectees to withdraw from the NIRM.

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See following page for brief summary



## PRONESTYL® TABLETS

### Procainamide Hydrochloride Tablets

The prolonged administration of procainamide often leads to the development of a positive anti-nuclear antibody (ANA) test with or without symptoms of lupus erythematosus-like syndrome. If a positive ANA titer develops, the benefit/risk ratio related to continued procainamide therapy should be assessed. This may necessitate considerations of alternative anti-arrhythmic therapy.

**DESCRIPTION:** Pronestyl (Procainamide Hydrochloride) is the amide analogue of procaine hydrochloride and is available for oral administration as veneer-coated tablets providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride.

**CONTRAINDICATIONS:** In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

**PRECAUTIONS:** Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of over-dosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

**ADVERSE REACTIONS:** Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

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**HOW SUPPLIED:** Pronestyl Tablets (Procainamide Hydrochloride Tablets) providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride are available in bottles of 100 and Unimatic® single-dose packaging in cartons of 100. The 250 mg and 500 mg tablets are also available in bottles of 1000.



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# Malignant MELANOMA

## Prediction of Metastasis and Survival Based on Gross Anatomic Characteristics

**Robert T. L. Long, M.D.**

From the Muscle Shoals Area Hospitals and  
Department of Surgery,  
University of Alabama School of Medicine

Before the second half of the 20th century malignant melanoma apparently defied efforts at grading or staging to determine prognosis. A simple clinical classification of staging proposed by Sylvén<sup>1</sup> prevailed: (Stage I-localized; Stage II-regional metastatic; Stage III-general metastatic). In recent years, determination of prognosis for the individual Stage I lesion has been based on the studies of W. H. Clark, Mehnert, McGovern, Breslow, and others<sup>2, 3, 4, 5</sup> who demonstrated that depth of dermal invasion, and tumor thickness analyzed on a microscopic scale, provided the most useful criteria. For several years we have attempted to correlate gross anatomical characteristics of malignant melanomas with prognosis. This paper reports the results of this study in 150 patients.

### MATERIAL AND METHODS

Many of these patients were seen for the initial treatment of their lesions but most were referred

after initial treatment with recurrence or metastases. A number of indeterminate cases, including those who died of unrelated causes, those who refused treatment and those who were lost to follow up were excluded. A total of 129 determinate cases remained. Of those 70 were treated initially elsewhere and 59 presented without previous therapy. The determinate cases presenting without previous therapy were treated by wide local excision, some patients receiving elective or prophylactic regional node dissection, and others therapeutic (clinically positive) node dissections. Amputative procedures were not considered separately from wide local excision because when used, they were necessary for control of the primary. Preliminary biopsy was used, and frozen section examination discouraged because of the difficulty in microscopic analysis of some lesions. If the tumor is flat and 3 cm or less, not located on the face, neck, breast or visible extremity excisional biopsy was used. Incisional biopsy was preferred for the larger lesion or for lesions on the face, neck or hand, where knowledge of the depth of invasion

Table 1: Delay in Definitive Therapy

	5-Year Survival	Local Recurrence
Yes (4 weeks to 4 years)	18.5%	40%
No	40.6%	11%

Table 2: Primary Determinate Cases

	No.	Percent
Inoperable	10	17%
Regional Node Metastases	20	35%
Local Excision F.O. Disease	19	32%
Gen. Metastases w/o Regional Spread	9	15%
Total	59	100%

Table 3: Therapeutic and Elective Dissection:  
5-Year Control\*  
(Cases with histologically proved metastases)

	Total No.	5-Year Control	Percent 5-Year Control
Therapeutically Dissected	32	8	25.0%
Electively	9	3	33.3%

\*p 0.65

Table 4: Influence of Tumor Location on 5-Year Control Rate\*

Site	No. Patients	5-Year Control	Percent
Hand and Wrist	2	2	100%
Head and Neck (exposed)	17	11	64.7%
Arm (unexposed)	2	1	50.0%
Lower Extremity	21	7	33.0%
Scalp	5	1	20.0%
Trunk	12	2	16.6%

\*p .05

Table 5: Influence of Ulceration on Control Rate and Metastases

	Total No. Cases	5-Year Control*	Metastases+
Ulcerated Tumors	43	23.5%	46.5%
Non-ulcerated	18	61.6%	38.8%

\*p .088

+ .6

Table 6: Tumefaction: Its Influence on 5-Year Incidence of Metastasis

	Total Cases	5-Year Control*	Metastases+
Elevated	34	32.3%	50%
Macular	6	100 %	16.6%

\*p .002

+p .13

was desired before determining the surgical margin. The surgical margin was 5 cm in all directions where feasible. This rule was compromised on the face and hand. With polypoid lesions, extremely wide excision was preferred.

Only cutaneous tumors are included. The lesions of the head and neck were divided into those of the exposed skin, and those of the scalp. The hand was considered separately from the unexposed area. The number of characteristics, including diameter of the lesion, presence of palpable tumefaction or nodularity, ulceration, and anatomical site were analyzed and correlated with survival rates (Table 2). In the series evaluating tumefaction and maximum diameter only those cases in which an accurate description of the lesions had been recorded could be used. Survival after therapeutic dissection as compared with elective regional node dissection was determined for patients with histologically proven node metastasis only.

## RESULTS

There were only 2 patients surviving over 5 years from initial treatment who subsequently developed metastases, the longest survival with disease being 9 years. In determinate cases the five year control rate was 28%. Of the 50 presenting for initial treatment a control rate of 40.6% was obtained. In those who were treated initially elsewhere and referred for recurrent disease, the five-year control rate was 18.5%. This group had a delay in definitive local treatment that varied from 1 week to 4 years after the patient presented to a physician. In this group the local recurrence was 40% as compared with 11% for those treated initially (Table 1).

Of the 59 patients presenting without treatment elsewhere 10 (17%) were operable. Of the remaining 49, twenty developed nodal metastases as their initial evidence of spread, 2 developed tumor nodules between the primary and the regional nodes (in transit metastases), and 9 developed generalized metastases following wide local excision without previous evidence of regional spread. Nineteen patients were well after 5 years without evidence of spread from the primary. Of the 9 patients who developed generalized metastases without previous evidence of regional spread, 5 had undergone elective regional dissections, in which no nodes were found to be involved, clearly suggesting a hematogenous route of dissemination. No cures were obtained in the 7 patients who developed local recurrences.

In all determinate cases with histologically proven positive nodes, 32 were treated by therapeutic dissection with a 25% five year control rate. Of 24 patients with elective dissections, 9 had positive

nodes and a five year control rate of 33.3% was obtained (Table 3). The five year control rate in all operative (curable) patients was 40.9%. Of those patients subjected to regional node dissection 30.9% of those with histologically proven metastases survived for 5 years, while 58% of those without nodal metastases survived 5 years. (This is virtually identical with the data of Goldman.)<sup>6</sup>

Lesions of the hand and wrist carried the best prognosis. Lesions of the exposed skin of the head and neck followed, with those of the scalp and trunk having the poorest prognosis (Table 4). The five year control rate in ulcerated lesions was 25.5% compared with 61.6% in those not ulcerated (Table 5). Similarly in lesions with tumefaction the control rate was 32.3% compared to 100% in purely macular lesions (Table 4). There was no statistically significant variation in survival based on maximum diameter (Table 7). There was a decline in five year survival rate with advancing age which proved to be statistically significant (Table 8).

## DISCUSSION

The data presented here indicate that those melanomas which have a palpable nodule or tumefaction (Fig. 1, 2, 3) especially if ulcerated, carry a decidedly worse prognosis than non ulcerated macular lesions, both in relation to survival and to demonstrated metastases. The fact that ulceration is seen almost exclusively in lesions with tumefaction suggests that it is an indication of a more advanced lesion. It may also suggest hematogenous dissemination as the rate of regional metastases is not proportionately as high. The good prognosis seen in lesions of the exposed upper extremity, followed by those of the exposed skin of the head and neck may be due to the inclusion of the lentigo maligna melanoma in these areas. In Fitzpatrick's series lesions of the ear carried a very poor prognosis in comparison with the skin of the neck<sup>7</sup>. Tumors of the lower extremity and unexposed arm are intermediate while those of the trunk and unexposed scalp carried a very poor prognosis.

Our data on size of the lesion conflict with that of Cochran who found a decrease in survival rate with increase in diameter of the lesion<sup>8</sup>. Breslow demonstrated that no lesion under 5 mm in diameter metastasized<sup>5</sup>. With lesions 2 cm and over in diameter the metastatic rate was 59%<sup>5</sup>. We could find no such correlation which may be due to our inclusion of lentigo maligna melanomas.

In this material one-third of patients remained disease free after wide local excision, another one-third developed regional metastases for which they were treated, and another one-third developed



Table 7: Influence of Diameter on 5-Year Control\*

Maximum Diameter	Total Cases	5-Year Control	Percent
1 cm	26	11	42%
3 cm	26	13	50%
3 cm	21	8	38%

\*p .72

Table 8: A Comparison of Age and 5-Year Control Rates\*

Age	10-20	20-30	30-40	40-50	50-60
Total Cases	2	2	3	8	11
5-Year Control	1	1	2	5	5
Percent Control	50%	50%	66.6%	67.5%	45.4%

Age	60-70	70-80	80-90	90-100
Total Cases	16	14	3	1
5-Year Control	7	4	0	0
Percent Control	43.7%	28.5%	0%	0%

\*p .05

Table 9: Patterns of Metastasis

Group I	1/3 cured by immediate adequate local treatment.
Group II	1/3 may benefit from regional node dissection.
Group III	1/3 will develop generalized metastases initially or after local treatment.



Fig. 1—Extensive nodular change with ulceration occurring in lentigo maligna melanoma. Duration of lesion 20+ years.

Fig. 2—Lentigo maligna (Hutchinson's freckle) of forehead. No invasion was present. Lesion had been present for 8 years.

Fig. 3—Nodular melanoma of the pinna of the ear. A metastasis is visible in the post-auricular groove, below and to the left.

Fig. 4—Subungual lesion of the hallux with extensive invasion of pulp and phalanx. Nine year survivor after amputation of the toe.

Fig. 5—Superficial spreading melanoma with early nodular change. Note variation in color and irregular extent of the nodular change.

Fig. 6—Superficial spreading melanoma of the sole with nodular change and ulceration.

1



2



3



4



5



6



distal metastatic disease as the initial manifestation of spread (Table 9). The decision for or against elective node dissection is not answered by our data which indicate no statistically significant difference in survival after elective regional dissection as compared to therapeutic dissection. No patient in group 1 would benefit, and no patient in group 3 would benefit, leaving the 33% in group 2 in whom node dissection would have any therapeutic effect. Based on this data, if elective dissections were done in all melanoma patients (rather than therapeutic) we would increase the 5 year survival of the entire group by approximately 3% ( $25\% \times 1/3$  vs  $33\% \times 1/3$ ).

Since there is only a minimal advantage in survival, if any, of elective over therapeutic dissection, careful selection of patients is mandatory. The very low incidence of metastasis with purely macular lesions indicates that elective node dissection is not justified in this group. Also to be excluded are those patients with distant metastases, 17% of the total number in this series. The specter of performing unnecessary regional dissection with attendant operative mortality and morbidity, especially in neck dissection and groin dissection, has been discussed by Polk<sup>9</sup>. It seems that a prospective study of elective versus therapeutic node dissection in patients with unfavorable local signs in the primary lesion will be necessary to decide this issue.

The value of gross anatomic characteristics in determining prognosis has been demonstrated with results similar to these by Tompkins, Fitzpatrick et al and Mehnert et al<sup>10, 7, 4</sup>. In their study of pigmented skin tumors Clark et al suggested that the appearance of nodularity or tumefaction coincide with invasion to the reticular dermis and that metastases were likely to occur if invasion had progressed to this or deeper layers. Breslow has shown that the degree of tumefaction may be more significant than the level of invasion in determining prognosis. McGovern and his associates have pointed out the extremely poor outlook for polypoid lesions. The use of clinical characteristics of the tumor can be a valuable aid to the surgeon in assessing prognosis and the likelihood of metastasis when combined with microscopic depth of invasion and tumor thickness. There should be close cooperation between pathologist and surgeon. It is recommended that the specimen be seen in vivo by the pathologist before removal is undertaken so that he can evaluate the areas of suspicion. Good quality close photographs can be of great assistance. Marking of small nodular areas in the tumor with dyes are also helpful.

A case illustrating the difficulties encountered in evaluating these lesions follows: A 29 year old

married Caucasian female was seen with an irregularly pigmented flat lesion of the interscapular skin measuring 2.5 cm in diameter. Two small areas of excrescence 2 mm each in diameter elevated 2.5 mm were noted grossly. The lesion was excised under general anesthesia; and, after confirmation of the diagnosis of melanoma, a wide (5 cm margin) excision with skin grafting was carried out. The pathologist's report indicated invasion into the papillary dermis only. BCG intradermally was utilized for 1 year and then discontinued and the patient was reassured of her excellent prognosis. Twenty-three months after surgery a right hemiparesis developed, and a metastatic lesion characteristic of malignant melanoma was removed from the right frontal lobe. On careful review of the case it was appreciated that microscopic sections were not obtained through the small nodular areas of the tumor. Had this anatomic guide (most easily appreciated in the in vivo state) been observed, a more accurate assessment of prognosis might have been made.

### SUMMARY

One hundred twenty-nine patients with malignant melanoma surgically treated have been reviewed. The value of gross anatomic characteristics in prediction of survival and metastasis is demonstrated. The application of these data to decision making for surgical therapy is outlined.

\*The author is indebted to Dr. David Hurst for the statistical analysis.

\*\*Parts of this paper were presented at the meeting of the Alabama Chapter, American College of Surgeons, Point Clear, May 7, 1976.

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**CONTRAINDICATIONS:** Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

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A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease. Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

**In patients receiving Purlinethol<sup>®</sup> (mercaptapurine) or Imuran<sup>®</sup> (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptapurine or azathioprine. Subsequent adjustment of doses of Purlinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.**

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**PRECAUTIONS:** Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

#### ADVERSE REACTIONS:

**Dermatologic:** Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

**Gastrointestinal:** Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

**Vascular:** There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angitis which have led to irreversible hepatotoxicity and death.

**Hematopoietic:** Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim<sup>®</sup> (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

**Neurologic:** There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

**Ophthalmic:** There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yu for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

**Drug Idiosyncrasy:** Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

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**OPHTHALMOLOGY:** Age 32; Kansas, 1974; American Board Eligible in 1980; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

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**OPHTHALMOLOGY:** Age 31; Tulane University, 1974; American Board Eligible; seeking practice in single specialty group, partnership or solo. Available August 1979. LW-11078.

\*\*\*

**PATHOLOGY:** Age 50, Medical College of Virginia, 1956; American Board Eligible; seeking practice in single specialty group, institutionally based or research. Available October 1979. LW-17027.

\*\*\*

**PSYCHIATRY/CHILD PSYCHIATRY:** Age 35; American Board Eligible; seeking practice in single specialty group, partnership, multi-specialty group or solo. Available August 1979. LW-15639.

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**RADIOLOGY:** Age 32; University of Alabama, 1973; American Board Certified; seeking practice in single specialty group, partnership or institutionally based. Available July 1980. LW-17661.

\*\*\*

**SURGERY, GENERAL:** Age 31; University of Alabama, 1974; American Board Eligible, 1980; seeking practice in single specialty group, partnership or solo. Available August 1980. LW-18156.

\*\*\*

**SURGERY, GENERAL:** Age 30; University of Alabama, 1974; seeking a surgical partnership or group practice, however will also consider exceptional opportunities in solo practice. Available July 1980. LW-070779.

\*\*\*

**SURGERY:** Age 47; seeking practice in specialty or possibly emergency room in a relatively small community. Available immediately. LW-070879.

\*\*\*

**SURGERY:** Age 40; Far Eastern University, 1961; American Board Eligible; seeking practice in a town with a population larger than 10,000. Available in the summer of 1979. LW-070979.

## PHYSICIANS WANTED (Opportunities for Practice)

**PRIMARY CARE PHYSICIAN**—Wanted to serve as Medical Director of a Primary Care Group Practice. Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice. Moving expenses, salary, other fringe benefits. PW-030179.

\*\*\*

**INTERNIST**—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

\*\*\*

**FAMILY PHYSICIAN**—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

\*\*\*

**GENERAL PRACTICE & O.B.**—Opportunity for a general practitioner who will deliver babies. 67 bed hospital is accredited, now has 150 deliveries per year. Town is located in northwestern section of the state; population 5,000 plus 10,000 trade area. Nice, modern office space available. PW-06179.

## OPPORTUNITIES FOR GENERAL PRACTITIONERS

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large

**FAMILY PRACTICE:** Age 50; Athens, Greece, 55; seeking practice in general, industrial or institutional in proximity to Mobile, Montgomery or Birmingham. Available 4-6 weeks from date of agreement. LW-071079.

\*\*\*

**GENERAL PRACTICE:** Age 33; UAB, 1975; seeking general practice near the TVA or Gulf Coast vicinity in a town with a population of 2,500-75,000. Available July-August 1980. LW-071179.

\*\*\*

**INTERNAL MEDICINE:** Age 30; King Edward Medical College, 1972; Board Eligible in Internal Medicine; seeking practice in specialty, solo or partnership in a town with a population greater than 10,000. Available January 1980. LW-071279.

city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

\*\*\*

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic are provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

\*\*\*

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.



Mrs. Eugene H. Bradley  
President, A-MASA

### *Chicago, Chicago, That Toddlin' Town*

Doctors, when this Journal reaches you, some of your wives will not be at home. They will be in Chicago at the American Medical Association Auxiliary meeting.

Delegates from Alabama and myself, as the Presidential Delegate, and six other delegates: Mrs. O. B. Carr Jr., Sylacauga; Mrs. Robert Estock, Birmingham; Mrs. William Hughes and Mrs. William Smith, Montgomery; Mrs. Rufus Lee, Dothan and Mrs. Aubrey Terry, Russellville.

We also have some Alternate Delegates and interested auxiliaries attending. They are Mrs. Homer Crandall, Mrs. Thomas Flynn and Mrs. George Scofield, Birmingham; Mrs. Arthur Stamler, Mrs. Charles Howell and Mrs. John Chenault, Decatur; Mrs. R. K. Wilson, Aliceville; and the lady on whom all eyes will be focused is Mrs. Ben Johnson, Jr., of Bessemer.

Alabama is so fortunate! Ruth will be installed as President of the AMA Auxiliary. Two other Alabamians have held this prestigious position; Mrs. W. G. Thuss, Birmingham, and Mrs. John Chenault, Decatur. Not many states have produced this many national

leaders and we are indeed excited about this particular convention.

Several receptions and parties are planned for this convention. A States Delegate Breakfast will be on Monday morning. This is always a good way to start the convention off by eating together. We go from one meeting to another all day long and sometimes at night but this year we are taking Tuesday night out to see "Annie," the Broadway play (not to see *me*.)

We always try to have one night on the town together. After all the business sessions are over, we will be anxiously awaiting the Wednesday morning session when our own Ruth Johnson will be installed. A reception follows this and our auxiliaries have painted optic butterflies to give as favors to all auxiliaries attending the convention.

Mr. and Mrs. Lon Conner and Mr. Richard Whitaker from the MASA Office will be up there to help us in all these activities. Their help is invaluable to us and we are delighted they will be around.

One of the most impressive ceremonies I think I have ever attended is

the installation of the AMA President on Wednesday night. The State Auxiliary Presidents have a seat of honor and are recognized. After their installation there is a dinner reception for the newly installed President of AMA and AMA Auxiliary, so our Ruth will again have all eyes on her.

Ruth will represent Alabama and The AMA Auxiliary well this year. She knows that we are all ready to help her in this year of volunteer work. We know that the best way we can help Ruth is for our Auxiliary to be the best Auxiliary that it can possibly be. And we plan a year ahead just like that!

So to Ruth we give all our congratulations on having attained this high position and our best wishes for a good year. And to Dr. Ben, there will possibly be some cold, left-over meals, but knowing him as I do, I can say he will be just like us and proud of his Ruth.

Thank you, Doctors, for this page in your Journal and thank you for taking your precious time to read this.

*Annie*

Pres.-Elect—Mrs. O.B. Carr, Jr.; First Vice-Pres.—Mrs. Rufus Lee; District Vice-Pres. NW—Ralph Braund; NE—Mrs. Andrew Brown; SW—Mrs. Clifford Pringle, Jr.; SE—Mrs. William Lazenby; Rec. Sec.—Mrs. Wallace Frierson; Treas.—Mrs. Robert Estock.



# For recurrent attacks of urinary tract infection in women

## Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.



### Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications and Usage:** For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

**Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.**

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

**Warnings:** Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

*Urinary Tract Infections:* Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

*Children two months of age or older*

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

*Pneumocystis carinii pneumonitis:* Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

**Supplied:** Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

Her next attack of cystitis may require

# the Bactrim™

## 3-system counterattack



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of

Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

## Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

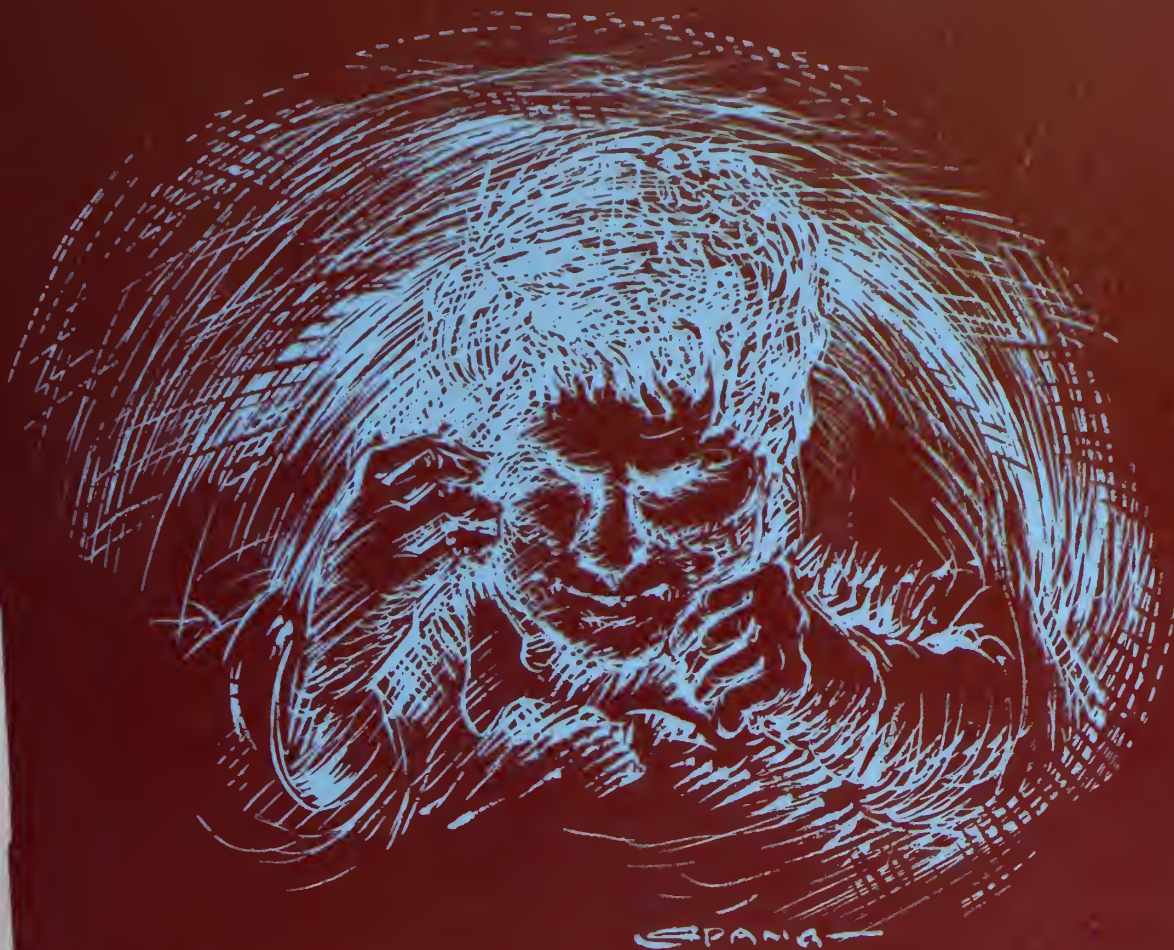
Please see reverse side for summary of product information.



# JOURNAL

of the Medical Association of the State of Alabama

AUGUST, 1979



## Psychiatric Disability in Alabama

See page 17

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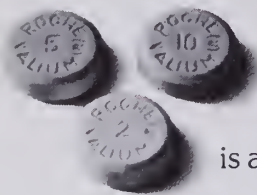
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# A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own.

Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

## Valium® diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets  
a prudent choice in psychic  
tension and anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500, Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

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**Style:** The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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**Length of Articles:** Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

**Illustrations:** Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct, drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

**Reprints:** Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama*, P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

## From the Executive Director

### Man and His Ethics

The first Principles of Medical Ethics were enunciated by the American Medical Association back in 1847. But ethics as a philosophical study and evaluation of human conduct is older than civilization, having roots in man's earliest strivings for order and rectitude, the law of the tribe.

The Principles were revised during the 1940s, again in 1957, and most recently interpreted in 1977 by the Judicial Council's "Opinions and Reports."

This year's revision was necessitated by recent lawsuits that make injunctive strictures inviting targets for those who would destroy organized medicine—and ethics with it. While many physicians may regret the relaxation of "thou shalt not" ethical mandates, in a very real sense ethics cannot be legislated. It arises from the heart and mind.

One of the true giants of science and philosophy, Blaise Pascal of 17th Century France, said that, in the final analysis, ethics means dignity of thought: "Let us endeavor, then, to think well: this is the principle of ethics."

Many hair-splitting philosophers have taken the metaphysical position that ethics is inborn, innate, a form of moral conscience. Others, just as opinionated, have disputed this, arguing that ethics grows out of experience, culture, family religion, history and the whole of human experience.

By the late 18th Century Immanuel Kant, the German metaphysician, was laying down his famous ethical dogma, the categorical imperative: "Act as if the maxim from which you act were to become through your will universal law."

That is, you can't go far wrong if you act in a way that you wish all men would act. Greatly oversimplified, the categorical imperative came down to us in our childhood as the Golden Rule.

Ralph Waldo Emerson, the authentically American philosopher, pondered professional ethics and produced a rather simple prescription, just six years before the AMA propounded its first Principles.

In *Spiritual Laws* (1841), Emerson wrote:

"We must hold a man amenable to reason for the choice of his daily craft or profession. It is not an excuse any longer for his deeds, that they are the custom of his trade. What business has he with an evil trade?"

That may sound obvious and self-evident today (although evil trades still exist) but 138 years ago it was considered a fresh insight and a rather harsh philosophy, imposing the absolute duty to do good on all who called themselves craftsmen and professionals. A new and impetuous nation, full of sharp operators and hucksters of every type, needed that strong dose of moral tonic.

What last month's debate on the revision of the AMA's Principles was all about was this: doing good according to the dictates of one of man's loftiest callings, medicine. If ethics does not exist within, it can rarely be successfully imposed from without.

S. Lon Conner





Luther L. Hill, M.D.  
President

## The Work of Councils

Our medical association is indebted to the council members for the time and thought they give to their work.

A very important part of medical association work is done by the councils and committees. The action they take greatly influences the direction the association takes in addressing so many problems. So far this year, two councils have been active.

The Council on Legislation, through telephone conferences, has been in almost constant session since April. The Chairman, Dr. Orizaba Emfinger, has made several trips to Montgomery, testified at public hearings and consulted with our legislative representative, Richard Whitaker, many times.

Over three hundred bills had to be evaluated and a stand taken on them. The contents of major bills have been well covered in *The Alabama M.D.* Members of the Council on Legislation are: Orizaba Emfinger, M.D., Chairman, Union Springs; Paul D. Everest, M.D., Montgomery; Earl Riley, M.D., Fairfield; Guy Hood, Jr., M.D., Selma; and Felix Tankersley, M.D., Montgomery.

The Interspecialty Council, chaired by Dr. Josiah Reed, met at the Association building in Montgomery Sunday, July 15. The action of the College of Counsellors and House of Delegates, in reference to the last report, was reviewed. Among other things, Council members assumed the responsibilities of an editorial board for reviewing the medical articles published by MASA.

Those in attendance, and the specialty they represented, were:

Anesthesiologists, Alvin J. Bearman, M.D., Birmingham; Emergency Physicians, Hoyt B. Price II, M.D., Birmingham; Family Physicians, Bill Owings, M.D., Centreville;

Internal Medicine, William L. Hawley, M.D., Birmingham; College of Physicians, Alan M. Siegal, M.D., Mobile; Neurosurgical Society, John E. Hackman, M.D., Montgomery;

Nuclear Medicine, James H. Larose, M.D., Birmingham; OB-GYN, James H. French, M.D., Montgomery; American College of OB-GYN, W. Steve Russell, M.D., Opelika;

Ophthalmology, Roy T. Hager, M.D., Montgomery; Otolaryngology and Maxillofacial Surgery, Richard C. Carroll, M.D., Montgomery; Pediatrics, F. Carden Johnston, Jr., M.D., Birmingham; Plastic & Reconstructive Surgeons, H. T. Montgomery, M.D., Montgomery;

American Psychiatric Association, Donald J. Silberman, M.D., Birmingham; Academy of Neurology & Psychiatry, Robert G. Ford, M.D., Birmingham; College of Surgeons, Josiah F. Reed, Jr., M.D., Montgomery; Thoracic Society, William J. Tally, M.D., Gadsden; Urologic Association, Mell L. Duggan, M.D., Birmingham.

*Luther Hill*



U. S. ARMY MEDICAL DEPARTMENT

# ARMY FIRST YEAR GRADUATE MEDICAL EDUCATION

## GENERAL

The Army Medical Department (AMEDD) represents the largest comprehensive system of health care in the United States. Within one centrally directed system, the medical disciplines of patient care, preventive medicine, research, education, and administration are coordinated to provide a unified system of health care for approximately three and one-half million people including Active Army personnel, their dependents, as well as retired military personnel and their dependents.

During the summer of 1980, the Army is offering a large number of First Year Graduate Medical Education (FYGME) positions. Previously, most positions were filled by participants in the US Army Health Professions Scholarship Program (HPSP). However, for training beginning in July 1980, the Army will be actively seeking qualified civilian applicants who have no current Army affiliation.

## DESCRIPTION

Army medical training programs are among the best in the nation. All are approved by the Liaison Committee on Graduate Medical Education of the American Medical Association. Virtually all recognized residencies are offered. Most Army training facilities are affiliated with a medical school. Medical centers and hospitals are well equipped with laboratory, medical, surgical, radiological, library and other requisite facilities. Medical records keeping is excellent.

All patients are available as teaching patients. The range of cases, both in age and complexity, is virtually impossible to duplicate. Because of the scope of the Army's activities and its highly sophisticated evacuation system, you will have the chance to see and study diseases you would never encounter in most programs. Furthermore, you have no worry about your patient's ability to pay.

**The following Army FYGME programs are offered:**

(1) **Flexible.** The flexible FYGME program is designed as a year of broad medical education prior to pursuing a specialized residency or as a program for individuals as yet undecided about further specialization. Four months of medicine are required in this program along with additional requirements and electives that vary slightly from teaching center to teaching center.

(2) **Categorical.** Categorical programs are offered in medicine, surgery, obstetrics/ gynecology, pathology, pediatrics, physical medicine, and family practice. The majority of the 12 month period is spent on the service concerned or in related areas and is considered by most of the appropriate specialty boards as the first year of residency training.

(3) **Categorical diversified.** These programs are essentially a combination of the above two and are offered in radiology, psychiatry, neurology, and anesthesiology. The primary emphasis is upon the major specialty with additional required and elective rotations on other services.

To find out more information concerning this program, the eligibility criteria, service obligation, benefits and application procedures contact the AMEDD Personnel Counselor serving your area.

**Deadline** for applications is **1 September 1979**. All applicants are encouraged to also participate in the NIRMP. Sections for the Army FYGME Program will be announced in sufficient time for selectees to withdraw from the NIRMP.

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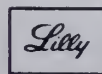
before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

**Precautions:** Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

**Adverse Reactions:** Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. (1021751)

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4 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL® 4-10: Each tablet contains  
4 mg perphenazine and 10 mg amitriptyline HCl.

**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdosage. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amitriptyline:** In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent alone. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling, black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

**OVERDOSAGE:** All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

J8TR31 (DC6613215)

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# The Control of Physician Production

by C. W. Scott, M.D.\*  
Deputy Dean

The medical education system, particularly the predoctoral and residency portions of it, functions in some respects as a servomechanistic system for the production of physicians. A feedback loop exists that tends to increase or decrease the production of physicians, depending upon the relationship between the number of physicians actually in the population and the number believed to be "correct" for the population.

In the early part of this century, it was believed that there were too many physicians in the United States, and the feedback loop was activated leading to the closing of many medical schools.

Since the early to middle 1960s, the feedback loop has been activated again by the perception that there was a serious shortage of physicians, leading to considerable expansion of enrollment in most U.S. medical schools and the beginning of several new medical schools.

The point of this communication is not how many physicians we need or whether we are faced with a surplus in the near future. The point rather is the feedback loop, its inability to control the numbers of U.S. physicians within the bounds of "too many" and "too few," and the situation in which this leaves medical education in the United States.

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In case the subject is not clear, consider one example of the many biological servomechanisms. The adrenal cortex makes cortisol from raw materials and releases it into the circulation. Cortisol production and release is normally controlled by the blood concentration of ACTH from the pituitary. The production and release of ACTH from the pituitary is normally controlled by (among other things) the concentration of cortisol in the blood.

A corrective feedback mechanism exists that keeps the blood cortisol level in the "normal range;" that is, somewhere between "too much" and "too little." This property identifies servomechanistic behavior in a system, and it is this aspect of the production of physicians being addressed here.

Consideration of servomechanisms in general leads to the conclusion that the effectiveness of the feedback loop in controlling the output of the production system depends upon a number of factors and relationships, including:

- The sensitivity of the trigger for the feedback loop. Another way of expressing this is the difference between the number or concentration of the product in the environment that will trigger feedback and the number or concentration that will be clearly "too high" or "too low." The greater this

difference, the more sensitive the feedback trigger.

- The specificity of the feedback loop. That is, how specific is the information fed back, and how specific is its interaction with the production system to accomplish the necessary correction.
- The efficiency of the feedback loop. That is, the relative time required for feedback to be triggered, translated, interpreted, transmitted, and received, and the time required for the received information to accomplish an increase or decrease in production.
- The time required for the system to produce the product.
- The life span of the product.

With respect to these factors, the system that produces physicians has a feedback loop with very low sensitivity, poor specificity, and low efficiency. There is a built-in production time delay, consisting of four years of medical school plus at least three years of residency training. More will be said about this in relation to the effective life span of a physician, which is three or four decades at most.

Any servomechanism with an inherent delay has the propensity for cycling; that is, for wide swings in output of product and in product

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amount or concentration in the environment. Whether a servomechanism will cycle depends upon a number of relationships, the most important of which are feedback loop characteristics and the relationship between production time delay and product life span.

The history of United States medical education and physician manpower in this century has been that a "crisis" must exist before action can and will be taken to increase or decrease the output of physicians. Further, the "crisis" must be identified as such through political mechanisms in order to exert necessary pressures and to provide necessary resources.

In terms of the feedback loop, this says that there must already be politically perceivable "too many" or "too few" physicians to trigger feedback and the difference between the number or concentration that is critically high or low is zero, or nearly so. To repeat, the feedback trigger sensitivity is very low.

The feedback loop is also demonstrably of low specificity and poor efficiency. There are now dire warnings about an impending surplus of physicians. If these projections are accurate, their effect is being diluted by efforts to turn attention away from numbers to specialty and geographic distribution or to redesign of the "health care delivery system." The end result is muddled signals to the medical education system and unclear directions as to what to do about numbers.

For example, the preamble to Public Law 94-484 (the Health Manpower Act of 1976) states that, "Congress finds and declares that there is no longer an insufficient number of physicians and surgeons in the United States." This could be taken as a message to reduce the number of entering medical students. However, subsequent parts of the Act require medical schools to provide assurances that entering student enrollment will remain at least as high as in the preceding year in order to qualify for federal capitation funds.

As an illustration of the low efficiency of the feedback loop, the pressure to increase physician production began in the early to middle

1960s and resulted in a number of incentives to medical schools to increase enrollment and incentives to states to start new schools. The early implementation of enrollment increases was started about 1970, since many schools required new or expanded facilities, faculty augmentation, etc.

In Alabama, planning for physician production increases ultimately involved the development of a new medical school in Mobile and the addition of two clinical branch campuses to the school already situated in Birmingham. In 1979, none of these units has achieved the enrollment initially projected, and construction of facilities to permit the enrollment increase has neared completion only in the past year or two. Thus, it has taken more than a decade to enable the implementation of projected enrollments.

An additional irony is present, emphasizing the muddled nature of the feedback loop. The first substantial batch of new medical students entered in 1970 or 1971 in most cases. Considering the 4 years (3 years in some schools) of medical school plus at least 3 years of residency, the first batch of new physicians would be ready to enter practice in 1977 or 1978. Congress "found and declared" in 1976 that the United States had enough physicians and surgeons—a year before the first effects of physician production augmentation would be felt in practice.

The end result of all of this is that medical schools, in an effort to be responsive to social needs and pressures, have geared up to produce more physicians over the past decade or so. In the process of gearing up, they have incurred commitments that require the expenditure of large amounts of money and other resources. The message now appears to be that the augmentation of physician production is not needed or wanted any longer. However, the commitments still exist and the principal effective way the message is being received is in the reduction of financial support.

To return to the consideration of servomechanisms and physician production, it can be demonstrated

that effective control of physician numbers requires that changes in physician output must be accomplished within a time period less than a small fraction of effective physician life span. This small fraction is equal to or less than  $\frac{N_I - N_C}{N_C - N_S}$ ,

where  $N_I$  is the number of physicians in the population that will trigger feedback,  $N_C$  is the number of physicians that would be critically "high" or "low", and  $N_S$  is the number of physicians in the population that would result from a steady-state condition at the prevailing physician production rate.

As I have indicated, the numerator of this fraction is the feedback trigger sensitivity, and is near zero. Therefore, the available time to alter physician production to avoid "overshoot," once feedback is triggered, is very nearly zero. Regardless of how many physicians is the "correct" number, the existing feedback loop cannot control the number of physicians within bounds, and other strategy is necessary if excessive swings in physician manpower are to be prevented.

How can such swings be prevented? One logical way would be to develop a long-term estimate of how many physicians would be "enough" and how many would be "too many". The production rate could then be adjusted so that when a steady-state condition is achieved, the steady-state number of physicians would be between "enough" and "too many." There are, of course, many practical problems with this approach. There is unlikely to be general agreement on the boundary numbers. The steady-state condition would take considerable time to develop, and it may already be too late to prevent an overshoot. There is little allowance for changing circumstances that may change perceptions about "enough" and "too many."

Other alternatives might be similar to those used by biological servomechanistic systems. An excess of product could be produced, kept in storage and released upon demand. The Chinese have done something like this in producing "barefoot doctors" who live in communities. Mostly they work in



agriculture, etc., but assume the physician role when needed. It is not clear that Western society is prepared for this, and there certainly would be questions about quality.

Another alternative used in biological production mechanisms is partial processing to an immediate precursor of the final product, with storage of the partially processed product. Then, only one step is necessary to produce a final product when needed. Partial education of medical students might involve taking them through a core medical curriculum, followed by an indefinite preceptorship with a licensed physician. Upon demand, such individuals could be given any necessary additional training, testing, etc., and be licensed for independent practice.

These possibilities (and others of similar nature) are only theoretical, but it may be necessary at some time to consider such alternatives. If so, one additional feedback loop needs to be considered. While it is simple to think of medical education as a mechanism to produce physicians for society it must be recognized that it also provides career opportunity for young people.

The pressure at this time to admit more students to medical school comes not only from a perceived need for more physicians but also from the fact that medicine is perceived by students and their parents as a desirable career.

Thus, the supply of *applicants* to medical school is subject to feedback control, and the loop is long indeed. The perception that medicine is a desirable career may persist for years after the field is saturated and few job opportunities exist.

On the other hand, once people are convinced that medicine is not a desirable or feasible career option, this attitude may persist for years despite a clear shortage of physicians.

This very long feedback loop must be considered whenever steps are taken that may tend to reduce individual freedom of choice. In anything short of a totalitarian society, all such maneuvers could be defeated or impaired by the interplay among all the various feedback mechanisms.

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**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride) One 25 mg tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release One 75 mg tablet daily swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine<sup>®</sup>) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL NATIONAL LABORATORIES Inc  
Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL NATIONAL LABORATORIES

Division of Richardson-Merrell Inc

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**References:** 1. Citations available on request - Medical Research Department, MERRELL RESEARCH CENTER, MERRELL NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

**Merrell**

**Overweight may not always be simple...  
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# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

## **In uncomplicated overweight.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

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\*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

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# Psychiatric Disability

by  
Jack R. Anderson, M.D.\*



in Alabama during calendar year 1977 over \$225 million was paid to 58,000 disabled workers and their 47,000 dependent spouses and children through Social Security Disability Insurance.

In addition, \$72 million was paid to 52,000 disabled individuals through the Supplemental Security Income (SSI) program. During 1978, 13,600 new Social Security disability claims, 11,400 new SSI claims, and 10,800 new combined Social Security and SSI claims were processed in Alabama.

In addition to this total of 35,800 new applications for disability pay, 15,100 appeals were processed, for a total of 51,000 disability claims adjudicated in Alabama during the calendar year 1978.

The civilian work force in Alabama, as of December 1978, according to the Alabama Department of Industrial Relations Research and Statistics Division, was approximately 1.6 million. It is possible that 10% of this work force, 160,000 individuals, will either receive Social Security and SSI disability benefits this year or apply for them. The benefits paid to these workers and their dependents will probably exceed \$350 million.

According to individual viewpoints, this \$350 million can be regarded as an expression of society's compassion for the disabled individuals and their dependents, for whom it provides food, clothing and shelter; as a welcome shot in the arm for the Alabama economy, as most of it is spent shortly after it is received; or as an additional load for the already overburdened taxpayer to carry.

For the 60,000 workers receiving Social Security disability pay and their dependents, these benefits are not charitable donations in any sense of the word but simply insurance payments to which they are entitled by virtue of premiums they paid while they were able to work.

Estimated from national averages, approximately 8% of the disabled workers and their dependents in Alabama in 1977 received benefits for mental disorders. Disabling mental disorders include chronic brain syndromes, functional psychotic disorders, functional non-psychotic disorders and mental retardation. It is estimated that close to \$150,000 will be spent in Alabama this year purchasing psychiatric consultative examinations to be used in adjudicating disability claims for mental disorders.

## Many Difficulties

The adjudication of mental disability claims is attended by obvious difficulties. It is still not possible for a psychiatrist to see or hear patients' visual and auditory hallucinations or to experience the fears of the delusional patient or the pain, paralysis, or blindness of the conversion reaction claimants.

It is relatively easy for the sophisticated and determined claimant to exaggerate or downright simulate symptoms that he has learned from experience will qualify him for disability pay. As for mental retardation, it is easy to see how the higher functioning claimants will regularly score *lower* on standard intelligence tests than relatively lower functioning citizens as the higher functioning learn

\*Staff Psychiatrist, Division of Disability Determination, State of Alabama, Department of Education.



more quickly how many questions they must miss to qualify for disability pay.

It is indeed possible that an unwanted side-effect of the disability program will be to increase the incidence and prevalence of mental disorders through the simple mechanism of reinforcing them with the secondary gain of disability pay.


In order to minimize this possibility, it will be necessary to constantly improve the documentation of severity of mental conditions for which claims are filed. Toward this goal a major revision of the current listing of all impairments, including mental conditions has been prepared. It will be available upon request.

The thrust of this revision of mental impairments is a shift away from the traditional psychiatric interview and report which are oriented toward developing and reporting information useful for establishing an accurate diagnosis which in turn will lead to an effective treatment program. The shift is toward an interview and report useful in establishing the claimant's pre-morbid functional capacity and the degree of impairment of that former capacity that is directly attributable to a *medically determinable* mental condition.

The emphasis of the revised report will be on objective mental status data and a description of current daily activities. Opinions of the examining psychiatrist as to degree of disability will be de-emphasized in favor of the objective data that can be used by other psychiatrists at various levels of review and appeal to form an independent judgment as to severity.

The Alabama Disability Determination Division is presenting an updating course to acquaint Alabama consulting psychiatrists with the revised reporting that is required by the revised listings. The University of Alabama School of Medicine is co-sponsoring this course and has designated it as a continuing medical education offering, meeting the criteria for 3 credit hours in Category 1 of the Physicians Recognition Award of the American Medical Association.

The first of these Seminars was given in Birmingham for psychiatric consultants from Birmingham, Gadsden, and Anniston, on March 19, 1979, from 6:00 p.m. to 9:00 p.m. at the Disability Office, 2800 Eighth Avenue, South. Courses will be scheduled for other regions in the State in the near future.



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**INDICATIONS:** *Therapeutically*, (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyoderma (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the

ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

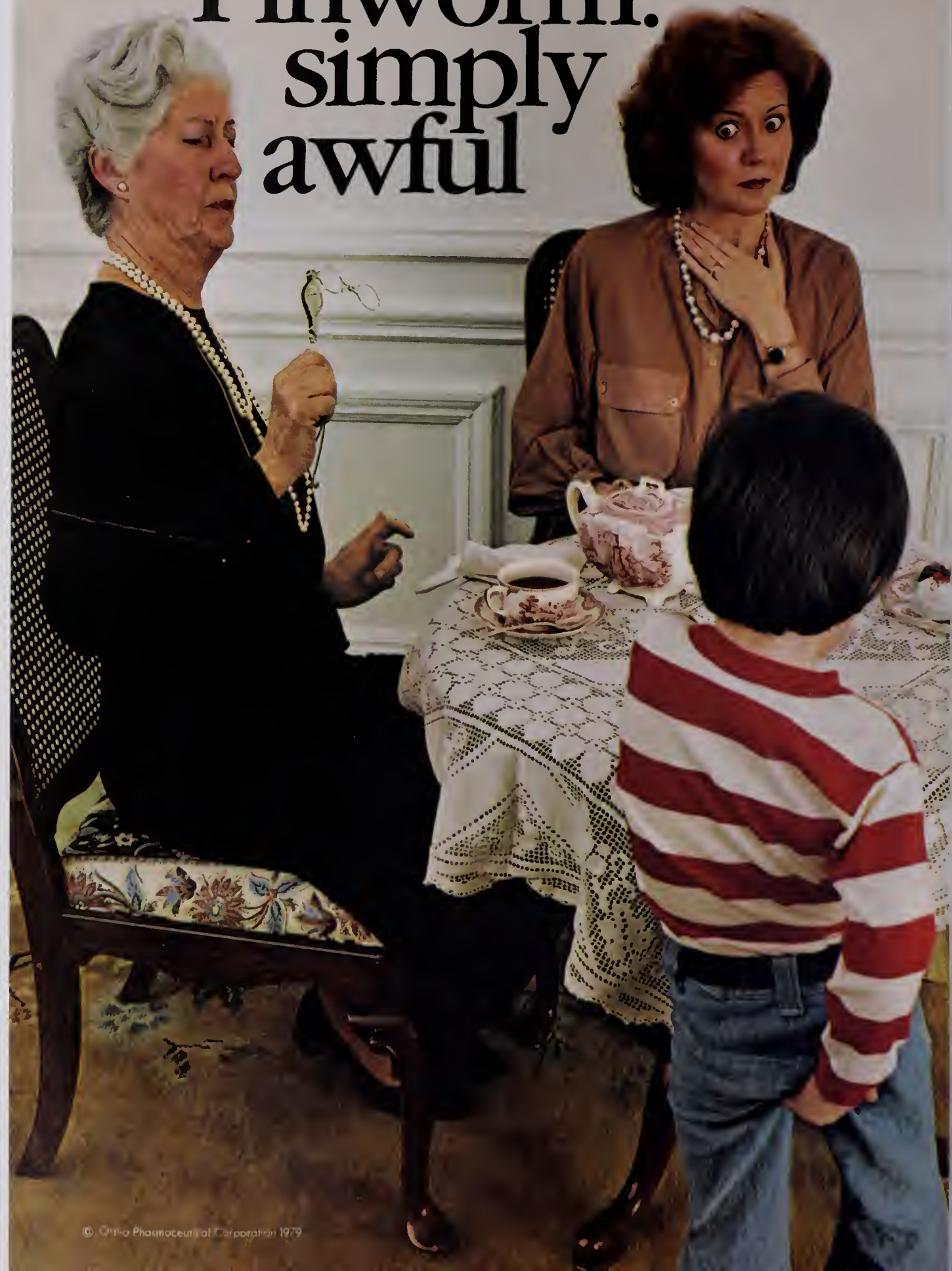
**PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



# Pinworm: simply awful





# Vermox: awfully simple

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**one dose** single VERMOX 100 mg tablet is the treatment for pinworm in both adults and children\* of all body weights; no dosage calculations or confusion

**one time** the VERMOX tablet may be taken any time that is convenient, so that normal routines won't be interrupted; convenient schedule encourages compliance

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**95% cure** mean cure rate in clinical studies was 95% (range: 90%-100%) after treatment with one VERMOX tablet; in cases of reinfection, a second tablet is advised

\* Because Vermox has not been extensively studied in children under two years of age, the relative benefit-risk should be considered before treating these children. Vermox is contraindicated in pregnancy (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

## Vermox<sup>chewable</sup> (mebendazole)<sup>tablets</sup>

TRADEMARK

**Description** VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

**Actions** VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival.

In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 µg/ml and 0.09 µg/ml, respectively.

**Indications** VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies in function of such factors as pre-existing

diarrhea and gastrointestinal transit time, degree of infection and helminth strains.

**Contraindications** VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

**Precautions** **PREGNANCY:** VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

**PEDIATRIC USE:** The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

**Adverse reactions** Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

**Dosage and administration** The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food.

For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.








**How supplied** VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.

VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium, and co-developed by Ortho Pharmaceutical Corporation.





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The irritable bowel\*...restless...easily  
disturbed... strikes when agitated



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relax the bowel, stop the pain...and the classic calming  
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\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy for this indication.

Please see BRIEF SUMMARY on following page.

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# PATHIBAMATE®

## 200 Tablets/400 Tablets

Tridihexethyl Chloride 25 mg.—Meprobamate 200/400 mg.

- **PATHILON®** Tridihexethyl Chloride stops spasm, relieves pain
- **Meprobamate** calms the patient

**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: Possibly Effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension. It should be used as an adjunct to other appropriate measures such as proper diet and antacids.

**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above)

**Additive Effects:** Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. **Pregnancy and Lactation:** Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlorthalidopexide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. **Meprobamate:** To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: **CNS:** Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. **G.I.:** Nausea, vomiting, diarrhea. **Cardiovascular:** Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). **Allergic or Idiosyncratic:** (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). **Hematologic:** (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). **Other:** Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

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# Interesting Obstetrical Cases

### *Eclampsia: Background Factors and Management Decisions.*

Bruce A. Harris, Jr., M.D. and John F. Huddleston, M.D.

A single black fourteen-year-old para 0-0-0-0 was admitted to a referral hospital at 4:00 a.m., Saturday morning, with a history of having had repeated convulsions during the previous night. The patient was about 38 to 39 weeks pregnant. She lived with her widowed father and seven siblings. She had not recognized her pregnancy at first, but finally had made three prenatal visits to her physician. The last visit was one month before admission. The day before admission she developed a severe headache and beginning at 7:00 p.m. in the evening, she had several convulsions. She was removed to the County Hospital at 8:45 p.m. on Friday night. Her admitting blood pressure was 170/100. Here she was given the following medications: Valium 10mg I.V. at 8:50 p.m., Lasix 21mg I.V. at

9:40 p.m., Dilantin 100mg I.V. at 9:45 p.m. A Foley catheter was inserted into the bladder and 5% Dextrose in water was given intravenously. Her seizures persisted. She was then given Atarax 25mg and Demerol 50mg intramuscularly at 1:00 a.m. Saturday morning. Her seizures continued, and transfer to a referral institution was arranged. At the time of transfer, upon the advice of the receiving physician, the patient was given 4 grams of Magnesium Sulfate I.V. (over a period of twenty minutes) and 10 grams of Magnesium Sulfate I.M. The patient's past family history, and system review were entirely negative.

Upon admission to the referral hospital, the temperature was 98.6, pulse 104, respiration 24, blood pressure 128/88. The patient was drowsy and exhibited anasarca. Eye grounds showed an arterio-venous ratio of 1/2 with focal arteriolar narrowing. The lungs showed scattered rhonchi without signs

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Division of Maternal and Fetal Medicine,  
Department of Obstetrics and Gynecology,  
University of Alabama in Birmingham.

of consolidation. The heart was normal with a grade 2/6 systolic ejection murmur which was thought not to represent valvular disease. The abdomen contained a fetus which was estimated to weigh 2800 grams. Upon pelvic examination, the cervix was 1-2 centimeters dilated, 80% effaced, the vertex presented at station -3. The cervix was soft and posterior and it was felt that induction might be possible. Deep tendon reflexes were 2+. Urine showed a negligible quantity of albumin. Chest x-ray was negative. P.C.V. was 33. Ultrasound examination of the abdomen showed a biparietal diameter of 9.3 centimeters, corresponding to 39 weeks gestation. The placenta was posterior. The white count was 11,900, fibrinogen 325mgm %, partial thromboplastin time was 24/33. Prothrombin time was 9.9/10.6, SGOT was 19 mv/1, Creatinine 1.0 mg/dl, BUN 6 mg/a1, Magnesium 5.1 mEq/1. Electrolyte studies included Sodium 141 mEq/1, Chloride 107 mEq/1, Potassium 3.4 mg/dl, Bicarbonate 22 mEq/1.

External fetal monitor tracings showed no decelerations and a fetal heart rate of 140. Induction of labor was begun with oxytocin at 9:00 a.m. At this time the cervix was 3 centimeters dilated, 75% effaced, and the vertex at -3. Position was OP. The patient experienced good labor, which ranged from 175-200 Montevideo units, as measured on internal monitor. After six hours of labor, however, the cervix had progressed to only 4 centimeters, 85% effaced, with the vertex being at -2. It was felt that the patient had a moderately contracted inlet with a diagonal conjugate of 11.5. Low transverse Cesarean section was done under general anesthesia, producing a male infant in good condition, Apgar 9-9, weighing 3540 grams.

Postpartum, the patient was continued on Magnesium Sulfate. On the second postpartum day she complained of blindness. Ophthalmologic examination showed retinal hemorrhages, edema, and some spasm. A consultant felt that the distant prognosis was for some recovery of vision but with retinal scarring.

### Comment:

The juvenile primigravida is at an especially great risk of toxemia of pregnancy. However, this patient had only three prenatal visits. It is impossible to assign any responsibility for this relatively insufficient prenatal care. Ideally, juvenile primigravidae should be seen oftener than once a month: they are vulnerable to many complications, of which only one is hypertensive disease.

When the patient convulsed, she was given Valium, Lasix, Dilantin, Demerol, and Atarax. Doubtless, these medications were given with the

intention of controlling convulsions and promoting diuresis. Recent studies, however, have shown that the very best anticonvulsant for pregnant women is Magnesium Sulfate. This drug should be given in a dose of 4 grams intramuscularly. Sedatives and diuretics are not indicated, because they cause profound sedation of the infant (who is already at high risk). Moreover, the eclamptic patient should not be given diuretics, since, although she has peripheral edema, she also has a severe reduction of circulating blood volume.

If such a patient is seen in a hospital which is not equipped with a high-risk nursery, maternal transfer to such a hospital should be arranged as soon as possible. The infant will require expert care and sophisticated instrumentation.

When the patient reached the referral hospital, induction was attempted. These patients should be delivered from below, if possible. However, if induction does not speedily result in good labor and good progress, or if fetal distress, as measured by electronic monitoring, occurs, the patient should be delivered by Cesarean section without delay. Delivery, whether abdominal or vaginal, should be undertaken as soon as the patient's condition is stable.

Laboratory findings in this patient were interesting in that there was a prolongation of the partial thromboplastin time. A coagulative deficit is frequently seen in this disease. Moreover, albuminuria was minimal. Eclampsia without gross albuminuria is most unusual.

This woman delivered a baby who has done well. Unfortunately, the mother became totally blind. This is a result of retinal detachment. Retinal edema, leading to detachment, is a common feature of eclampsia. Complete reattachment of the retina, with restoration of sight, often occurs, but there may be residual visual deficits.

### Summary:

Any juvenile primigravida should be regarded as being at high risk, and should be seen at least every two weeks during pregnancy. Such supervision will detect toxemia before convulsions occur. If seizures do develop they are best treated with intravenous and intramuscular Magnesium Sulfate. The convulsing patient should be transferred without delay to an institution having a neonatal intensive care unit. As soon as the patient's condition is stable, delivery should be undertaken, preferably from below. Frequently, severe toxemia is not followed by adverse sequelae. However, the patient may sustain a cerebro-vascular accident with residual paralysis, or permanent ocular or renal damage.



# Clinical Use of the EEG

by Robert G. Ford, M.D.

Some understanding of the basic nature and capability of the electroencephalogram (EEG) is necessary for its proper use in clinical practice. A few general remarks may help the clinician not familiar with the EEG to utilize it more appropriately. The EEG remains an important diagnostic tool, especially if one has some understanding regarding its limitations and specificity. The EEG is helpful not only in patients with primary neurological problems, but also in patients exhibiting changes in function of the central nervous system secondary to some other general process.

To Richard Caton in 1875 goes the credit for being first to detect electrical currents from the exposed brain of the rabbit and monkey. It was not until 1929 that Hans Berger first recorded the EEG in humans, using a simple galvanometer. Berger was first to observe the basic waking rhythm or alpha rhythm, which he mistakenly thought arose from the entire cerebral cortex. Berger termed the basic rhythm (8 to 14 Hz), recorded from the posterior head region and

reactive to the state of alertness of the subject, the alpha rhythm.

Because there was the barest ripple of response recorded, most investigators viewed his findings with skepticism. However, in 1934, Adrian and Matthews, with the aid of the electronic amplifier, confirmed Berger's findings and also determined that the alpha rhythm arose from the occipital region.<sup>1</sup> In 1935, Gibbs, Davis, and Lennox first demonstrated 3 Hz spike and wave discharges in the EEG of a patient with petit mal absence seizures.<sup>2</sup>

Gray Walter in 1936 first demonstrated slow waves, or delta waves as he termed them, in a patient with known brain tumor. Delta waves were delineated as those wave-forms in the EEG of less than 4 Hz. Walter and Dovey (1944) termed the remaining 4 to 8 Hz rhythms, theta activity. At first, only one channel recording was used, later three, and then six. It is common practice today to record with 10 to 18 channels, or amplifiers, simultaneously. This allows the electroencephalographer to record certain physiological phenomena such as respirations, eye movement (electro-oculogram, EOG), muscle activity (electromyogram, EMG) and movements of the body and limbs.<sup>1</sup>

## I Wave Forms Comprising the EEG

The electrical activity of the brain recorded from the scalp is generally of the magnitude of 5 to 100  $\mu$ V. That is, the electrical activity must be amplified one million times as it appears in the

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*Address given by Robert G. Ford, M.D., at the state convention of the AAMA in Huntsville, Alabama, August 5, 1978, to the Alabama Society. Dr. Ford, Electroencephalographer, Baptist Medical Center, Montclair, is Clinical Instructor in Neurology, University of Alabama in Birmingham.*



EEG. The immature and adult EEG consist of the alpha rhythm, theta activity, beta activity (activity 14 Hz and greater), and some delta activity. Other wave-forms occur in physiologic sleep including sleep spindles (10-14 Hz), vertex sleep transients or V-waves, and K-complexes, composites of sleep spindles and delta frequencies.

Other wave-forms occur only in infancy, such as the pattern of discontinuous delta activity (trace alternant) appearing during quiet sleep in the neonate, and the so-called delta brush pattern occurring in the premature infant. Other normal wave forms encountered in the adult include mu rhythm (a 9 to 12 Hz rhythm occurring in the central head regions abolished by movement of a limb) and lambda waves, evoked responses from changes of fixation of gaze.<sup>s,1</sup>

## II Technique of Performance of the EEG

Twenty-one standard electrodes are placed, according to the 10-20 International System based on 10% and 20% of distances from certain skull landmarks.<sup>3</sup> It is mandatory that very low electrical resistances be obtained between recording electrodes and the patient's scalp to obtain artifact-free recording. In general, it takes about 25 minutes for the technologist to measure the patient's head and affix the electrodes. Usually, tin, silver, or goldplate electrodes are attached to the scalp with an electrolyte paste or are actually glued to the scalp with collodion. Electrolyte conducting jelly is then deposited underneath the cup electrode, assuring good contact with low electrical impedance. A *minimum* of 20 minutes recording is required for a routine waking record. Obviously, to obtain records with the patient asleep, recordings of 30 to 90 minutes or longer may be necessary.

In the routine waking or sleeping EEG, both sequential and common referential recordings are used. Sequential montages are electrode arrays connected to the amplifiers in sequence; for example, frontal-polar to frontal, frontal to central, etc. Reference montages are similar to chest leads used in the standard EKG. That is, a common reference is used to record differences in potential between many electrodes and one common electrode. Reference electrodes include the ear, chin, occiput, neck, or an average of all electrodes joined together through a known resistance. Each so-called referential and sequential montage or "run," as they are sometimes called, is recorded for a total of 10 to 12 pages, or about two minutes each. Hyperventilation for two to four minutes, opening and closing the eyes, mental alerting, and photic stimulation are routinely performed in each waking record unless contraindicated.<sup>4</sup>

The electroencephalographer is not responsible simply for "reading a test". It is necessary that the electroencephalographer be involved in technical problems relating to instrumentation, training of technologists, and consultation regarding what type of study is performed. The actual presence of

the electroencephalographer may be necessary in the placement of special electrodes, such as nasopharyngeal leads, special monitoring devices, the determination of cerebral death, technical problems regarding electronic interference, and emergency situations such as the patient's having a grand mal seizure. The electroencephalographer in charge of an EEG laboratory has the responsibility of adequate technical standards for routine and emergency recording, recording of special procedures such as monitoring of various physiological phenomena, and in emergency situations, the responsibility for an immediate report of the EEG. In the determination of electrocerebral silence in determining cessation of cerebral function in cerebral death, it may be necessary for the electroencephalographer to give a drug such as Anectine or Pavulon intravenously to abolish any muscle activity from the scalp contaminating the EEG and simulating cerebral electrical activity.<sup>5</sup>

## III The EEG as it Relates to Specific Problems

### A. Epilepsy

Probably the most important use of the EEG concerns the evaluation of patients with seizure disorders. Many EEG laboratories utilize additional nasopharyngeal electrodes with sleep recording in a patient who has been deprived of sleep for 24 hours. This is of singular importance in the evaluation of patients with complex partial seizures ("psychomotor or temporal lobe seizures"). When focal spikes, spike and wave discharges, or sharp waves occur in the waking record, it may not be necessary to record during sleep. In a child or adolescent suspected of absence or petit mal seizures it is most important to have the patient hyperventilate for 3 to 5 minutes since hyperventilation is the most potent activation procedure to elicit the petit mal attack. It should be emphasized that petit mal epilepsy is primarily a disorder of childhood. Many other types of seizure disorders are manifested by a number of different types of epileptiform patterns in the EEG, and the reader is referred to numerous excellent reviews of this complex subject.<sup>1, 6</sup>

### B. Space-occupying Lesions

Although in 1931 Berger had called attention to slow-wave activity in the EEG in patients with brain tumor, confirmation of focal delta slowing did not come until 1936. It has been demonstrated that the tumor itself does not generate abnormal slow wave activity. Cerebral tissue surrounding an expanding lesion produces the abnormal delta activity as it is encroached upon by the neoplasm. When a cerebral tumor becomes symptomatic, polymorphic or arrhythmic delta activity may be recorded in 75-85% of patients.

Since focal delta slowing produced by cerebral infarction and that produced by neoplasm is indistinguishable in a single recording, it is important to obtain serial tracings to differentiate between these possibilities. Progressive improvement in the EEG occurs over weeks or months in

cerebral infarction, whereas with neoplasm or some other expanding lesion the EEG shows progressive increase in amplitude and distribution of the slow wave focus. Cerebral abscess probably gives the highest yield with abnormal EEGs occurring in greater than 90% of cases.<sup>1</sup>

C. Head Injuries

It has been recognized that in cerebral concussion the EEG may not show any change unless it is performed within minutes of a head injury. Therefore, after a period of hours a normal EEG may be obtained in patients who have had loss of consciousness or amnesia. Serial tracings are of value in assessing the degree of improvement in patients with severe head trauma who have an abnormal EEG. Paradoxically, if a patient has a normal EEG and has significant neurological deficit weeks or months after severe head injury, it is unlikely that further clinical improvement will occur. In patients with severe head injuries and diffuse cerebral trauma, the EEG is likely to show diffuse delta and theta slowing. When local contusion or hemorrhage, epidural or subdural hemorrhage occur, the EEG may be useful in the recognition of focal cerebral injury manifested by focal slowing or asymmetry of background activity. The EEG is particularly useful in following patients with severe head injury as the EEG instrument can be transported readily to the bedside in the intensive care unit providing immediate assessment of cerebral activity.<sup>7</sup>

D. Infective and Noninfective Encephalopathies

The EEG usually shows diffuse delta and theta slowing in any encephalopathy. However, there are several instances in which the EEG may be quite specific. In subacute sclerosing panencephalitis (SSPE) the EEG shows periodic high voltage slow waves which are regularly repetitive every 3 to 12 seconds. If a child is suspected of having SSPE, the EEG may indeed confirm the diagnosis. Periodic, polyphasic sharp-waves occurring every 0.5 to 1.5 seconds may likewise confirm the diagnosis of Jakob-Creutzfeldt disease in an adult. Both these entities have now been demonstrated to be caused by slow virus infection. If a patient develops periodic sharp waves or focal delta activity in the temporal area early in the course of encephalitis, herpes simplex is strongly suspect.<sup>8</sup> The EEG may be one of the more sensitive indicators of frank or impending hepatic coma. As the phase of mental confusion occurs in hepatic encephalopathy, there is usually diffuse slowing in the theta range. Occasionally, bilaterally synchronous, frontally dominant triphasic delta waves of 2 Hz may pinpoint the diagnosis of hepatic coma.<sup>1</sup> Again, the EEG at the bedside is useful in a patient too ill to be transported from the ICU.

E. Disturbances of Sleep and Narcolepsy

Two disorders of sleep readily diagnosed by the EEG are the hypersomnia-sleep apnea syndrome

(HSA) and narcolepsy. In HSA there is excessive daytime sleepiness and emotional change. Nocturnally, as the patient falls asleep, there is closure of the upper airway with resultant apnea and hypoxia terminated by loud snoring respirations. The patient may become hypoxic several hundred times during a night from intermittent upper airway obstruction. All night sleep EEG recordings with monitoring of EKG, respiration and arterial oxygen saturation readily diagnose the condition. Treatment is tracheostomy, usually with dramatic improvement in daytime somnolence and emotional disturbance and nocturnal sleep disturbance. In patients with classical narcolepsy, including hypersomnolence, hypnagogic hallucinations, sleep paralysis and cataplexy, the EEG may confirm the diagnosis by documentation of reversal of the normal NREM (non-rapid eye movement), REM (rapid eye movement) sleep pattern. Normally, the REM phase of sleep does not occur until about ninety minutes after sleep onset. In the narcoleptic, REM sleep occurs first. This is documented by recording rapid eye movements, abrupt attenuation of tonic mimetic chin muscle activity, and diffuse slowing in the EEG.<sup>9, 10</sup>

F. The Evaluation of Patients in Coma and the Determination of Cerebral Death

In the absence of profound hypothermia or drug overdose, the EEG is confirmatory of cerebral cortical death if no activity can be recorded from the brain greater than 2 uV peak to peak voltage, or greater than the noise level of the recording system. A 30-minute recording is necessary, utilizing maximum amplification of the EEG machine and long interelectrode distances.<sup>1, 5</sup>

The EEG provides information regarding the clinical course and, in many instances, the nature of the pathological disturbance itself with patients in coma. All EEG machines are "portable" and can be used at the bedside when very ill patients cannot be transported to the X-ray department for other diagnostic studies such as the CT scan.

The foregoing remarks are not meant to be comprehensive. Excellent reviews are available for detailed information regarding the many and varied uses of the EEG. However, these points are made in an effort to help the clinician better utilize a very helpful study.

In summary, the EEG is a useful diagnostic tool for the clinician. Its usefulness is directly proportional to the skill and knowledge of the electroencephalographer, the EEG technologist, and the clinician desiring help with a particular problem. It is probably most useful in the management of seizure problems, but it provides helpful data in the care of patients suspected of having stroke, intracranial neoplasm and hemorrhage, the encephalopathies, coma, and sleep disorders, to mention only a few. The EEG is of prime importance in the continuing problem of the determination of cerebral death.

References on page 46.



# GONORRHEA

## *CDC Recommended Treatment Schedules, 1978*

Gonorrhea morbidity continues to increase in Alabama and throughout the United States. Along with this increase comes a growing number of drug resistant strains of gonococci. To keep abreast of these changes, the Center for Disease Control (CDC), Atlanta, is constantly monitoring and evaluating the various therapy regimens used throughout the United States. Periodically, the Center modifies or revises its recommendations for the treatment of the various stages of gonorrhea. Enclosed is a copy of the most recently revised schedule. The Alabama Department of Public Health has adopted these new guidelines and in cooperation with CDC urges their use by the physicians of the State.

Improper or inadequate treatment of gonorrhea confounds the control problem rather than helping it. As a service to the Venereal Disease Control Program and to the physicians of the State, it would be greatly appreciated if the total schedule could be published in the Journal of the Medical Association.

Your assistance will be greatly appreciated. For additional information please contact Mr. George C. Hilliard, Alabama Venereal Disease Control Program, 832-3205.

Frederick S. Wolf, M.D.

Director

Personal Health Services Administration  
State Department of Public Health

*Note: Physicians are cautioned to use no less than the recommended dosages of antibiotics.*

### UNCOMPLICATED GONOCOCCAL INFECTIONS IN MEN AND WOMEN

#### *Drug Regimens of Choice*

Aqueous procaine penicillin G (APPG) 4.8 million units injected intramuscularly at two sites, with 1.0 g of probenecid by mouth.

or

Ampicillin 3.5 g, or amoxicillin 3.0 g, either with 1 g probenecid by mouth. Evidence shows that these regimens are slightly less effective than the other recommended regimens.

Tetracycline hydrochloride\* 0.5 g by mouth 4 times a day for 5 days (total dosage 10.0 g). Other tetracyclines are not more effective than tetracycline hydrochloride. All tetracyclines are ineffective as a single-dose therapy. Except for penicillin sensitive patients, this regimen should be used only when a follow-up proof of cure culture can be assured.

Patients who are allergic to the penicillins or probenecid should be treated with oral tetracycline as above. Patients who cannot tolerate

\*Food and some dairy products interfere with absorption. Oral forms of tetracycline should be given 1 hour before or 2 hours after meals.



tetracycline may be treated with spectinomycin hydrochloride 2.0 g in one intramuscular injection.

#### *Special Considerations*

- Single-dose treatment is preferred in patients who are unlikely to complete the multiple-dose tetracycline regimen.
- The APPG regimen is preferred in men with anorectal infection.
- Pharyngeal infection is difficult to treat; high failure rates have been reported with ampicillin and spectinomycin.
- Tetracycline treatment results in fewer cases of postgonococcal urethritis in men.
- Tetracycline may eliminate coexisting chlamydial infections in men and women.
- Patients with incubating syphilis (seronegative, without clinical signs of syphilis) are likely to be cured by all the above regimens except spectinomycin. All patients should have a serologic test for syphilis at the time of diagnosis.
- Patients with gonorrhea who also have syphilis or are established contacts to syphilis should be given additional treatment appropriate to the stage of syphilis.

#### *Treatment of Sexual Partners*

Men and women exposed to gonorrhea should be examined, cultured and treated at once with one of the regimens above.

#### *Followup*

Followup cultures should be obtained from the infected site(s) 3-7 days after completion of treatment. Cultures should be obtained from the anal canal of all women who have been treated for gonorrhea.

#### *Treatment Failures*

The patient who fails therapy with penicillin, ampicillin, amoxicillin, or tetracycline should be treated with 2.0 g of spectinomycin intramuscularly.

Most recurrent infections after treatment with the recommended schedules are due to *reinfection* and indicate a need for improved contact tracing and patient education. Since infection by penicillinase ( $\beta$ -lactamase)-producing *Neisseria gonorrhoeae* is a cause of treatment failure, posttreatment isolates should be tested for penicillinase production.

#### *Not Recommended*

Although long-acting forms of penicillin (such as benzathine penicillin G) are effective in syphilotherapy, they have NO place in the treatment of gonorrhea. Oral penicillin preparations such as penicillin V are not recommended for the treatment of gonococcal infection.

## PENICILLINASE-PRODUCING NEISSERIA GONORRHOEAE (PPNG)

Patients with uncomplicated PPNG infections and their sexual contacts should receive spectinomycin 2.0 g intramuscularly in a single injection. Because gonococci are very rarely resistant to spectinomycin and reinfection is the most common cause of treatment failure, patients with positive cultures after spectinomycin therapy should be re-treated with the same dose.

A PPNG isolate that is resistant to spectinomycin may be treated with cefoxitin 2.0 g in a single intramuscular injection, with probenecid 1.0 g by mouth.

#### *Treatment in Pregnancy*

All pregnant women should have endocervical cultures for gonococci as an integral part of the prenatal care at the time of the first visit. A second culture late in the third trimester should be obtained from women at high risk for gonococcal infection.

Drug regimens of choice are APPG, ampicillin or amoxicillin, each with probenecid as described above.

Women who are allergic to penicillin or probenecid should be treated with spectinomycin.

Refer to the sections on acute salpingitis and disseminated gonococcal infections for the treatment of these conditions during pregnancy. Tetracycline should not be used in pregnant women because of potential toxic effects for mother and fetus.

## ACUTE SALPINGITIS (Pelvic Inflammatory Disease)

There are no reliable clinical criteria on which to distinguish gonococcal from nongonococcal salpingitis. Endocervical cultures for *N. gonorrhoeae* are essential. Therapy should be initiated immediately.

A. Hospitalization should be strongly considered in these situations:

1. Uncertain diagnosis, in which surgical emergencies such as appendicitis and ectopic pregnancy must be excluded.
2. Suspicion of pelvic abscess.
3. Severely ill patients.
4. Pregnancy.
5. Inability of the patient to follow or tolerate an outpatient regimen.
6. Failure to respond to outpatient therapy.

B. Antimicrobial Agents

Outpatients

APPG 4.8 million units intramuscularly, ampicillin 3.5 g or amoxicillin 3.0 g each with

*Continued on page 48*

# The Maker

## Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

*MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.*

**FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were**



not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

---

*MYTH: Industry favors only "expensive" brand names and denigrates all generics.*

**FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.**



# Matters.

*MYTH: Generic options almost always exist.*

**FACT:** About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

---

*MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.*

**FACT:** Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

*MYTH: Drugs account for a major portion of the rise in health care costs.*

**FACT:** Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

---

*MYTH: Government intrusions into the marketplace will save tax money.*

**FACT:** Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

## The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

## The maker does matter

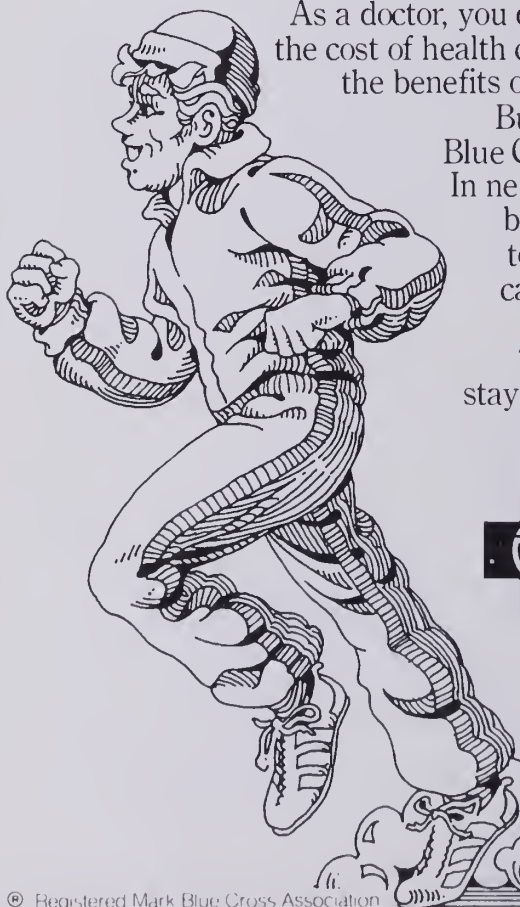
After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

The logo for the Pharmaceutical Manufacturers Association (PMA) consists of the letters 'PMA' in a bold, stylized, serif font. The 'P' and 'M' are connected, and the 'A' is separate.

Pharmaceutical Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005



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As a doctor, you don't need to be told what's happening to the cost of health care. You also don't need to be told about the benefits of regular exercise and a healthy lifestyle.

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Together we can tell all Alabamians that staying healthy is the best way to hold down the high cost of health care.



**Blue Cross  
Blue Shield**  
of Alabama



# Conduct with Pronestyl® Tablets

## Procainamide Hydrochloride Tablets

**The only procainamide in  
vener-coated, easy-to-swallow tablets**



**250 mg**



**375 mg**



**500 mg**

- available in 3 tablet strengths for easier dosage adjustment—up or down—in all patients
- produced under exacting quality control standards by Squibb—numerous critical control tests from starting material to finished product
- offered only under the Squibb label—your assurance of reliable, quality therapy for life-threatening arrhythmias

See following page for brief summary

## PRONESTYL® TABLETS

### Procainamide Hydrochloride Tablets

The prolonged administration of procainamide often leads to the development of a positive anti-nuclear antibody (ANA) test with or without symptoms of lupus erythematosus-like syndrome. If a positive ANA titer develops, the benefit/risk ratio related to continued procainamide therapy should be assessed. This may necessitate considerations of alternative anti-arrhythmic therapy.

**DESCRIPTION:** Pronestyl (Procainamide Hydrochloride) is the amide analogue of procaine hydrochloride and is available for oral administration as veneer-coated tablets providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride.

**CONTRAINDICATIONS:** In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

**PRECAUTIONS:** Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of over-dosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

**ADVERSE REACTIONS:** Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

For full prescribing information, consult package insert.

**HOW SUPPLIED:** Pronestyl Tablets (Procainamide Hydrochloride Tablets) providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride are available in bottles of 100 and Unimatic® single-dose packaging in cartons of 100. The 250 mg and 500 mg tablets are also available in bottles of 1000.



'The Priceless Ingredient of every product is the honor and integrity of its maker.'<sup>TM</sup>





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In addition, a third hospital — in Dothan, Alabama — is now under construction and will open in late 1980.



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# *Buffering CME Pains*

by  
George D. Oetting, Ed.D.  
Director of Education

Last fall I had the opportunity to explain our Alabama CME planning activities to other CME staffers at the AMA Sixth Conference on CME.

The presentation was entitled "A Noble Commitment—the nitty gritty that follows." Since July 1, 1979, was the beginning of the mandatory CME membership requirement, we are starting that painful nitty gritty phase. What follows are some personal suggestions and comments to help reduce those CME administrative pains during the implementation of this requirement.

*A Painful Philosophical Aside:* Before offering some analgesics, let me discuss one CME pain that unfortunately will never entirely subside. Even with administrative helpers, computer printouts, CME attendance cards, etc., each physician will ultimately have to assume final responsibility for keeping track of his own CME activities. It would be wonderful if we could have one big statewide computer to do this with a periodic printout of some sort. But CME within Alabama is presented by so many different sponsors, this would be a very difficult and expensive undertaking.

The Council on Medical Education gave this problem considerable review, but felt that we should proceed slowly with our record-keeping role—as recommended in our survey of other comparable state societies having a CME membership requirement. Our educational staff and resources are very limited, and

the Council felt that these should be devoted to the improvement of the instructional program rather than record keeping.

*Several Pain Reducers:* Here are some suggestions that should help to minimize personal CME administrative pains. For those who have already been involved in CME requirements for years, these "reducers" may already be in use; for those who haven't gotten into CME seriously as yet, you may find all these remedies helpful.

1. *Pick Your CME Route:* The MASA CME requirement is tied to your getting CME certification through the AMA Physician's Recognition Award (PRA) or other approved compatible CME programs of national specialty organizations. At present, nine of these have been approved. (American Academy of Dermatology—AAD; American Association of Neurological Surgeons/Congress of Neurological Surgeons—AANS/CNS; American College of Emergency Physicians—ACEP; American College of Obstetricians and Gynecologists—ACOG; American College of Radiology—ACR; American Psychiatric Association—APA; American Society of Clinical Pathologists/College of American Pathologists—ASCP/CAP; American Society of Colon and Rectal Surgeons—ASCRS; The American Academy of Family Physicians—AAFP.)

If you are a member of one of these, then you will probably go the specialty route, and use the one certification for two purposes. Those not in these specialties will probably want to use the PRA route.

2. *Gather Past Report Cards:* Most of you have been involved in formal CME activities for many years. Unfortunately you may not have bothered to keep past report cards on your efforts, because there wasn't a need to do so. Now you will need to get yourself accustomed to keeping this information and in some cases making a personal note of activities that might not be documented by a fancy attendance certificate—e.g. only you know about your professional reading, teaching work, etc.

Remember that most of these certification programs allow you to claim credit for the past three years activities—but nothing earlier than that. For example, if you applied for the PRA on July 31, 1979, you could claim credit for all CME activity during the August 1, 1976–July 31, 1979 period. These past efforts cost you much time and money, so you should claim credit for them.

3. *Get A Helper:* Most MASA members will probably get a helper to actually keep track of CME activities, attendance records etc.—probably an office nurse, hospital secretary, or even a spouse. In any case, please give your helper adequate instruction in how to properly

perform this task. If your helper understands, he or she can then really do a good job, perhaps even "bug you" occasionally to make sure no CME work is forgotten because of your busy schedule.

Almost every day, we get a call for help from some bewildered medical assistant who has just been put in charge of her doctor's CME records with no guidance. Some don't even know what "CME" means!

4. *Keep It all In One Place:* Tied in with the previous paragraph is the suggestion that you designate one place to maintain all your CME information. I have noted in recent visits to hospitals, that this is being done for all physicians having hospital privileges at many hospitals; others may want this kept in a personal office file or at home. In any case, one location for everything on CME

may help eliminate confusion or duplication.

*A Special MASA Pain Pill:* And speaking of keeping it all in one place (note smooth, clever transition) the MASA Education Department (pause for trumpet fanfare) has prepared a personal CME records folder which will be sent to every MASA member during the August to October 1979 period.

Made out of heavy duty cardboard, it will have three file sections to aid in maintaining CME information:

a. *General CME Information:* In here you can keep temporary CME information such as articles, the current CME Master Calendar, and *Journal* or *MD* tear-outs we print occasionally for your use.

b. *Current Personal CME Records:* This will be the place to file attendance records, notes—all the

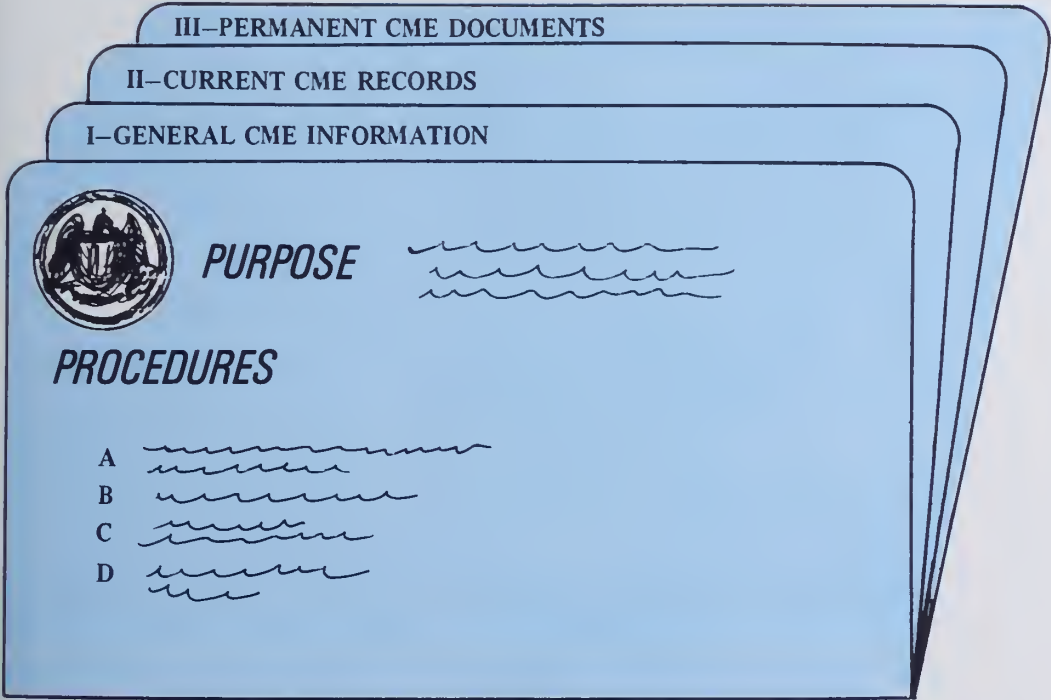
data you need to document your current three-year period of CME activity.

c. *Permanent Personal CME Documents:* Here is the CME archives, to keep permanent records such as PRA awards, specialty certificates—past records which might be needed for the IRS, licensure, etc.

Printed on the front of the folder will be "suggested procedures" to you; on the rear, we have extracted details of the MASA CME requirement from the Constitution and Bylaws.

So in one folder, either filed in or printed on, you will have "all you ever wanted to know about CME" in one place. Not a cure-all, but at least one way to help you meet the membership requirement as painlessly as possible. (See sketch showing construction of folder.)

**Personal CME Folder**



**SIDE VIEW**



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Together**

**Letter Size Folder  
FRONT VIEW**



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**When painful spasm  
is the presenting  
symptom...**





in the functional bowel/irritable bowel syndrome\*

# Bentyl<sup>®</sup>

## (dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,  
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity  
with minimal anticholinergic side effects<sup>†</sup>

### Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*“The correlation of spasm relief and drug given was excellent.”*

\*This drug has been classified “probably” effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

#### Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

# Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia, increased ocular tension; loss of taste; headache, nervousness; drowsiness; weakness, dizziness; insomnia, nausea, vomiting, impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup: **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection: **Adults:** 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

# Merrell

MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc.  
Cincinnati, Ohio 45215 U.S.A.

Continued from page 31.

## Clinical Use of the EEG

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Call the South Central Bell Business Office today. Ask for full details about the Touch-a-matic phone. Rotary dial, or Touch Tone<sup>®</sup> service where available.



**South Central Bell**



probenecid 1.0 g. Either regimen is followed by ampicillin 0.5 g or amoxicillin 0.5 g orally 4 times a day for 10 days.

or

Tetracycline\* 0.5 g taken orally 4 times a day for 10 days. This regimen should not be used for pregnant patients.

#### Hospitalized patients

Aqueous crystalline penicillin G 20 million units given intravenously each day until improvement occurs, followed by ampicillin 0.5 g orally 4 times a day to complete 10 days of therapy.

or

Tetracycline\* 0.25 g given intravenously 4 times a day until improvement occurs, followed by 0.5 g orally 4 times a day to complete 10 days of therapy. This regimen should not be used for pregnant women. The dosage may have to be adjusted if renal function is depressed.

Since optimal therapy for hospitalized patients has not been established, other antibiotics in *addition* to penicillin are frequently used.

#### C. Special Considerations

- Failure of the patient to improve on the recommended regimens does not indicate the need for stepwise additional antibiotics but requires clinical reassessment.
- The intrauterine device is a risk factor for the development of pelvic inflammatory disease. The effect of removing an intrauterine device on the response of acute salpingitis to antimicrobial therapy and on the risk of recurrent salpingitis is unknown.
- Adequate treatment of women with acute salpingitis must include examination and appropriate treatment of their sex partners because of their high prevalence of non-symptomatic urethral infection. Failure to treat sex partners is a major cause of recurrent gonococcal salpingitis.
- Followup of patients with acute salpingitis is essential during and after treatment. All patients should be recultured for *N. gonorrhoeae* after treatment.

### ACUTE EPIDIDYMITIS

Acute epididymitis can be caused by *N. gonorrhoeae*, *Chlamydia* or other organisms. If gonococci are demonstrated by Gram stain or culture of urethral secretions, treatment should be:

APPG 4.8 million units, ampicillin 3.5 g or amoxicillin 3.0 g, each with probenecid 1.0 g. Either regimen is followed by ampicillin 0.5 g or amoxicillin 0.5 g orally 4 times a day for 10 days.

or

Tetracycline\* 0.5 g orally 4 times a day for 10 days.

If gonococci are not demonstrated, the above tetracycline regimen should be used.

### DISSEMINATED GONOCOCCAL INFECTION

#### A. Equally effective treatment schedules in the arthritis-dermatitis syndrome include:

Ampicillin 3.5 g or amoxicillin 3.0 g orally, each with probenecid 1.0 g, followed by ampicillin 0.5 g or amoxicillin 0.5 g 4 times a day orally for 7 days.

or

Tetracycline\* 0.5 g orally 4 times a day for 7 days. Tetracycline should not be used for complicated gonococcal infection in pregnant women.

or

Spectinomycin 2.0 g intramuscularly twice a day for 3 days (treatment of choice for disseminated infections caused by PPNG).

or

Erythromycin 0.5 g orally 4 times a day for 7 days.

or

Aqueous crystalline penicillin G 10 million units intravenously per day until improvement occurs, followed by ampicillin 0.5 g 4 times a day to complete 7 days of antibiotic treatment.

#### B. Special Considerations

- Hospitalization is indicated in patients who may be unreliable, have uncertain diagnosis, or have purulent joint effusions or other complications.
- Open drainage of joints other than the hip is not indicated.
- Intra-articular injection of antibiotics is unnecessary.

*Continued on page 51*



# This asthmatic isn't worried about his next breath...

**he's active  
he's effectively  
maintained on**

## **QUIBRON<sup>®</sup>**

Each capsule or tablespoonful (15 ml) liquid  
contains theophylline (anhydrous) 150 mg  
and glyceryl guaiacolate (guaifenesin)  
90 mg

- theophylline for effective  
around-the-clock  
bronchodilator therapy
- 100% free theophylline

**Indications:** For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.

**Warnings:** Do not administer more frequently than every 6 hours, or within 12 hours after repeat dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

**Precautions:** Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrovanaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

**Adverse Reactions:** Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.

**How Supplied:** Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Liquid in bottles of 1 pint and 1 gallon.


See package insert for complete prescribing information.

**Mead Johnson** PHARMACEUTICAL DIVISION

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# The Great Laxative Escape



## COLAGE

diethyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

**Mead Johnson**

PHARMACEUTICAL DIVISION

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C. Meningitis and endocarditis caused by the gonococcus require high-dose intravenous penicillin therapy. In penicillin-allergic patients with endocarditis, desensitization and administration of penicillin is indicated; chloramphenicol may be used in penicillin-allergic patients with meningitis.

### Gonococcal Infections in Pediatric Patients

With gonococcal infections in children beyond the newborn period the possibility of sexual abuse must be considered. Genital, anal, and pharyngeal cultures should be obtained from all patients before antibiotic treatment. Appropriate cultures should be obtained from individuals who have had contact with the child.

### Prevention of Gonococcal Ophthalmia

As required by the Code of Alabama 22-20-2 and by local epidemiologic considerations, the effective and acceptable regimen for prophylaxis of neonatal gonococcal ophthalmia is one percent silver nitrate solution.

### Special Considerations

- Bacitracin is not recommended.
- The value of irrigation after application of silver nitrate is unknown.

### Management of Infants Born to Mothers With Gonococcal Infection

The infant born to a mother with gonorrhea is at high risk of infection and requires treatment with a single intravenous or intramuscular injection of aqueous crystalline penicillin G 50,000 units to full-term infants or 20,000 units to low-birth-weight infants. Topical prophylaxis for neonatal ophthalmia is not adequate treatment. Clinical illness requires additional treatment.

### Neonatal Disease

A. Gonococcal Ophthalmia: Patients should be hospitalized and isolated for 24 hours after initiation of treatment. Untreated gonococcal ophthalmia is highly contagious. Aqueous crystalline penicillin G 50,000 units/kg/day in 2 doses intravenously should be administered for 7 days. Saline irrigation of the eyes should be performed as needed. Topical antibiotic preparations alone are not sufficient or required when appropriate systemic antibiotic therapy is given.

B. Complicated Infection: Patients with arthritis and septicemia should be hospitalized and treated with aqueous crystalline penicillin G 75,000 to 100,000 units/kg/day intravenously in 2 or 3 divided doses for 7 days. Meningitis should be treated with aqueous crystalline penicillin G 100,000 units/kg/day, divided into 3 or 4 intravenous doses, and continued for at least 10 days.

### Childhood Disease

Children who weigh 100 lbs. (45 kg) or more should receive adult regimens. Children who weigh less than 100 lbs. should be treated as follows:

#### Uncomplicated Disease

Uncomplicated vulvovaginitis, urethritis, proctitis or pharyngitis can be treated at one visit with:

Amoxicillin 50 mg/kg orally with probenecid 25 mg/kg (maximum 1.0 g).

or

Aqueous procaine penicillin G 100,000 units/kg intramuscularly plus probenecid 25 mg/kg (maximum 1.0 g).

#### Special Considerations

- Topical and/or systemic estrogen therapy are of no benefit in vulvovaginitis.
- Long-acting penicillins, such as benzathine penicillin G, are not effective.
- All patients should have followup cultures and the source of infection should be identified, examined and treated.

### Gonococcal Ophthalmia

Ophthalmia in children is treated as in neonates but the dose of penicillin is increased to 100,000 units/kg/day intravenously.

#### Complicated Infections

Patients with peritonitis or arthritis require hospitalization and treatment with aqueous crystalline penicillin G, 100,000 units/kg/day intravenously for 7 days. Aqueous crystalline penicillin G 250,000 units/kg/day intravenously in 6 divided doses for at least 10 days is recommended for meningitis.

#### Allergy to Penicillins

Children who are allergic to penicillins should be treated with spectinomycin 40 mg/kg intramuscularly. Children older than 8 years may be treated with tetracycline 40 mg/kg/day orally in 4 divided doses for 5 days. For treatment of complicated disease, the alternative regimens recommended for adults may be used in appropriate pediatric dosages.

# Classified Advertising

Classified advertising sells for \$7.50 for 30 words or less plus 20 cents for each additional word, payable in advance. Classified displays sell for \$10.00 per column inch. Ad box numbers can be substituted for formal addresses upon request at a cost of \$2.00. Copy deadline is the 1st of the month preceding issue of publication. Send copy to: Advertising Manager, JOURNAL, P.O. Box 1900-C, Montgomery, Alabama 36104.

**ALABAMA: Emergency Physician:** Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, A.L. Emergency Department, Physicians Medical Group, P.A., P.O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

**PRIMARY CARE PHYSICIANS** wanted to locate in West Central Alabama. Rural Health Initiation program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P.O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7445, evening hours 553-2198.

**ORTHOPEDIC SURGEON.** Excellent opportunity for a Board certified or eligible Orthopedic Surgeon. Office space or partnership is available in a modern, multispecialty, professional building adjacent to a modern, progressive, fully accredited medical center. Highly desirable location in Northern Alabama enjoys excellent schools and churches and a family atmosphere. Recreational opportunities abound. Reply with curriculum vitae to Vincent F. Bergquist, M.D., Suite 208, 402 Arnold Street, N.E., Cullman, AL 35055.

**EMERGENCY DEPARTMENT PHYSICIANS, P.A.,** John F. Davison, M.D. has six full time positions in Emergency Medicine available in Alabama and Florida. Requirements: 1. Alabama and/or Florida current license. 2. ACLS Certified. 3. Family or Internal Medicine Board eligibility or certification with a minimum of 1 year full time experience in Emergency Medicine or ABEM requirements

to take board in Emergency Medicine. Salary and Fringes negotiable. Starting date on or about 9/15/79. Send CV and request for further information to P.O. Box 546, Miami, Florida 33156.

**FOR SALE:** ADR Ultrasound Real Time Scanner, Model 2130, with all accessories including Model CM2 Camera; Electronic Calipers; Digital Freeze Frame, etc. Almost new, carries one full year warranty; reasonably priced. Contact the Woman's Clinic, P.A., Anniston, Alabama, (205) 236-4437 — Dr. Charles Brockwell; Dr. Lee Smith, or Mrs. Mary Brooks.

**GENERAL SURGEON** retiring after thirty-year practice in the same Birmingham southside location. We are offering for sale office building with full complement of medical equipment along with files of patients. Building has 2200 square feet, excellent location, two offices, waiting room, receptionist area, five exam rooms, laboratory, nurses' station, X-ray and dark room, three baths, adequate parking. Excellent terms available. Good potential for internist or family practitioner. The Rudolph Co., Inc. exclusive agents. Call John Rudolph, Jr. 879-4691, 967-9323 or Sara Parker 879-4691, 967-5510.

**GYNECOLOGIST WANTED**—for position with a women's medical facility located near New Orleans, La. Our clinic offers first trimester pregnancy terminations as well as routine gyn care. Special training is available. Remuneration — excellent. A physician wishing to establish his/her practice would find the clinic most satisfying. Send replies to: Box A, Journal of MASA, P.O. Box 1900-C, Montgomery, AL 36104.

**RELOCATABLE OR PERMANENT MEDICAL BUILDINGS** physicians offices, clinics, etc. Price ranges as low as \$15.00 to \$20.00 per sq. ft. Three to six weeks from date of order to completion of set up. Write or call King Business Services, P.O. Box 633, Haleyville, Alabama 35565 Phone (205) 486-2608.



## Now there's help for the alcoholic patient.

More than ever before, physicians are facing this problem. Now, there is an answer.

After extensive research, Brookwood Health Services has developed the Alcoholism Recovery Program which is offered by Brookwood Lodges at Valley Springs, Alabama.

The program includes four phases: Detoxification and medical treatment at Brookwood Medical Center; a 28 day treatment program at Brookwood Lodge; liaison with appropriate community groups and an extensive, two year "after care" program.

This program is approved by Blue Cross and most other major health insurers. It is the only program of its kind in Alabama.

When an alcoholic patient turns to you for help, contact Dr. Jack C. Whites at Brookwood Lodge/Valley Springs, Warrior, Alabama. Phone 647-1945.



**Brookwood  
Lodges**

The Alcoholism Division of **BROOKWOOD HEALTH SERVICES, INC.**  
2000-D Brookwood Medical Center Drive • Birmingham, Alabama 35209  
Accredited by the Joint Commission on Accreditation of Hospitals.



# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**EMERGENCY MEDICINE/INTERNAL MEDICINE:** Age 29; University of Athens, 1976; National Board Certified; will be American Board Eligible in 1979; seeking practice in emergency room, or industrial. Available September 1979. LW-18882.

\*\*\*

**FAMILY PRACTICE:** Age 47; University of Alabama, 1957; American Board Certified; seeking practice in multi-specialty group, single specialty group, partnership or solo. Available immediately. LW-18574.

\*\*\*

**FAMILY PRACTICE:** University of Mississippi, 1978; seeking affiliation with a group practice in a moderate sized community greater than 10-15,000 population. Presently a second year family practice resident. LW-070279.

\*\*\*

**FAMILY PRACTICE:** Age 50; Athens, Greece, 1955; seeking practice in general, industrial, or institutional in proximity to Mobile, Montgomery or Birmingham. Available 4-6 weeks from date of agreement. LW-071079.

\*\*\*

**GENERAL PRACTICE:** Age 33; UAB, 1975; seeking general practice near TVA or Gulf Coast vicinity in a town with a population of 2,500-75,000. Available July-August 1980. LW-071179.

\*\*\*

**GENERAL PRACTICE:** Age 26; McGill, 1977; National Board Certified; seeking practice in institutionally based, multi-specialty group or emergency room. Available immediately. LW-18968.

\*\*\*

**GENERAL PRACTITIONER:** Age 37; University of Louisville, 1967; American Board Certified; seeking practice in assistant or associate preferably in the Mobile area. Available immediately. LW-070379.

\*\*\*

**INTERNAL MEDICINE:** Age 28; Guntur Medical College, 1975; will be American Board Eligible in 1980; seeking practice in solo or emergency room. Available July 1980. LW-19346.

\*\*\*

**INTERNAL MEDICINE:** Age 30; King Edward Medical College, 1972; Board Eligible in Internal Medicine; seeking practice in specialty, solo or partnership in a town with a population greater than 10,000. Available January 1980. LW-071279.

\*\*\*

**INTERNAL MEDICINE/CARDIOVASCULAR:** Age 31; Bangkok, Thailand, 1971; American Board Certified in Internal Medicine and Cardiovascular Diseases; seeking solo practice in specialty in a town with a population of 10,000 or more. Available immediately. LW-070479.

\*\*\*

**INTERNAL MEDICINE/GASTRO-ENTEROLOGY:** Age 30; Baylor, 1975; American Board Certified in Internal Medicine; seeking practice in specialty, assistant or associate in a town greater than 100,000 population. Available August 1980. LW-080179.

\*\*\*

**SURGERY:** Age 47; seeking practice in specialty or possibly emergency room in a relatively small community. Available immediately. LW-070879.

**INTERNAL MEDICINE/RHEUMATOLOGY:** Age 30; University of Alabama, 1974; National Board Certified; American Board Certified; seeking practice in multi-specialty group, single specialty group or institutionally based. Available immediately. LW-18268.

\*\*\*

**INTERNAL MEDICINE:** Age 31; Baylor College of Medicine, 1973; American Board Certified; seeking practice in single specialty group, multi-specialty group, industrial, solo, partnership or school health. Available February 1981. LW-16401.

\*\*\*

**NEPHROLOGY:** Age 30; University of North Carolina, 1975; National Board Certified; American Board Certified; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group or partnership. Available July 1980. LW-19316.

\*\*\*

**NEPHROLOGY:** seeking practice in nephrology preferably in a large city. Available June 1980. LW-070579.

\*\*\*

**OBSTETRICS AND GYNECOLOGY:** Age 38; Stanley Medical College, 1963; American Board Certified; Available immediately. LW-070679.

\*\*\*

**OPHTHALMOLOGY:** Age 32; Kansas, 1974; American Board Eligible in 1980;

seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

\*\*\*

**PATHOLOGY:** Age 50; Medical College of Virginia, 1956; American Board Eligible; seeking practice in single specialty group, institutionally based or research. Available October 1979. LW-17027.

\*\*\*

**RADIOLOGY:** Age 32; University of Alabama, 1973; American Board Certified; seeking practice in single specialty group, partnership or institutionally based. Available July 1980. LW-17661.

\*\*\*

**RADIOLOGY, DIAGNOSTIC:** Age 40; Medical College of Georgia, 1967; American Board Certified; seeking practice in institutionally based, single specialty group or multi-specialty group. Available August 1979. LW-19267.

\*\*\*

**SURGERY, GENERAL:** Age 31; University of Alabama, 1974; American Board Eligible, 1980; seeking practice in single specialty group, partnership or solo. Available August 1980. LW-18156.

\*\*\*

**SURGERY, GENERAL:** Age 30; University of Alabama, 1974; seeking a surgical partnership or group practice, however will also consider exceptional opportunities in solo practice. Available July 1980. LW-070779.

## PHYSICIANS WANTED (Opportunities for Practice)

**PRIMARY CARE PHYSICIAN**—Wanted to serve as Medical Director of a Primary Care Group Practice. Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice. Moving expenses, salary, other fringe benefits. PW-030179.

\*\*\*

**INTERNIST**—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

\*\*\*

**FAMILY PHYSICIAN**—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

\*\*\*

**GENERAL PRACTICE & O.B.**—Opportunity for a general practitioner who will deliver babies. 67 bed hospital is accredited, now has 150 deliveries per year. Town is located in northwestern section of the state; population 5,000 plus 10,000 trade area. Nice, modern office space available. PW-066179.

\*\*\*

**OPPORTUNITIES FOR GENERAL PRACTITIONERS**  
Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large

city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

\*\*\*

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic area provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

\*\*\*

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.



Mrs. Eugene H. Bradley  
President, A-MASA

# *A Day in the Legislature*

For over 50 years, our auxiliary members have focused their individual talents, training and expertise on all phases of community life.

With skills honed from years of community involvement, we have pioneered major community health projects, sat on the executive committees of national voluntary organizations, and worked in concert with our medical societies on urgent health care issues.

To physicians' spouses, an intelligent conversation on health care legislation is a necessity.

Auxilians across our state now know and recognize the terminology of the times. . . . Professional Liability, Utilization Review Regulations, Maximum Allowable Cost.

And auxiliaries are aware of legislation's importance to our spouses' profession.

Our auxiliary members are kept informed on important legislative issues through newsletters from our Legislative Chairman, Mrs. Gilder

Wideman, and Co-Chairman, Mrs. Dewey White, both of Birmingham.

Our national auxiliary keeps us informed with an almost weekly mailing briefing us on national legislation affecting your profession. But one of the nicest things that we do is sponsor a meal and a visit with our own legislators. After changing the time and date a few times, the legislators gave Mrs. White a date for us to have an 8:30 breakfast on Thursday, May 17th.

So, bright and early that morning our members began arriving in Montgomery with boxes of "sweets" for our special legislator. Can you believe that over 200 attended this breakfast? Our auxiliary members left home in bare daylight to be there. Our legislators, Governor, Staff and MASA Staff were our guests.

This has become a traditional affair which all of us look forward to attending. We never discuss politics, we don't make speeches, we don't

ask favors. What do we do? We just like to sit down, talk and eat. We think this informal way is a good way for them to get to know us, who we are and our name, maybe.

Then, when they hear from us later, or we visit them on a business matter, they will remember us or our breakfast or the box of homemade sweets they received.

We were invited and even chauffeured to the Capitol to hear Governor James address a joint session. This was the first time that some of our members had ever been to a legislative session but they enjoyed it and are excited about things to come, legislative-wise.

Physicians' spouses are becoming better informed.

We're spreading this word.

People will begin to listen.

Do you realize that YOU make this all possible?

You did, by marrying us and making us eligible to be a member of the great auxiliary.

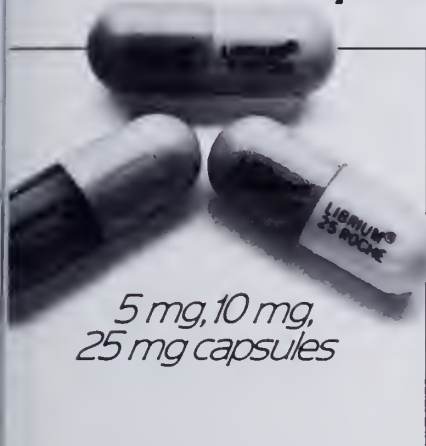
A handwritten signature in cursive script, appearing to read "Gilder".

Pres.-Elect—Mrs. O.B. Carr, Jr.; First Vice-Pres.—Mrs. Rufus Lee; District Vice-Pres. NW—Ralph Braund; NE—Mrs. Andre Brown; SW—Mrs. Clifford Pringle, Jr.; SE—Mrs. William Lazenby; Rec. Sec.—Mrs. Wallace Frierson; Treas.—Mrs. Robert Estock.



# Librium®

## chlordiazepoxide HCl/Roche



- ☐ Proven antianxiety performance
- ☐ An unsurpassed safety record
- ☐ Predictable patient response
- ☐ Minimal effect on mental acuity at recommended doses
- ☐ Minimal interference with many primary medications, such as antacids, anticholinergics, diuretics, cardiac glycosides and antihypertensive agents

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and

acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Usual Daily Dosage:** Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

**Supplied:** Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

*synonymous  
with relief of anxiety*



Roche Products Inc.  
Manati, Puerto Rico 00701

Please see following page.

# *Librium*®

*chlordiazepoxide HCl/Roche*

*5 mg, 10 mg, 25 mg capsules*



*synonymous  
with relief of anxiety*

Please see preceding page for a summary of product information.



# JOURNAL

of the Medical Association of the State of Alabama

SEPTEMBER, 1979

MS

vol. 49 #3

## Life Counsellors: Good or Bad? A Renewed Debate

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# A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own.

Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

**Valium<sup>®</sup>**  
**diazepam/Roche**  
2-mg, 5-mg, 10-mg scored tablets  
**a prudent choice in psychic  
tension and anxiety**

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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## Age And Youth

Dr. Hill, in his President's Message on page 3, addresses a question that is certainly as old as any form of government: the wisdom of age versus the enthusiasm of youth.

For that really is what the question, newly raised, on Life Counsellors is all about: Is the system one that enhances the aggregate wisdom of the Association by giving life status to veteran Counsellors? Or does it discourage younger physicians from more active participation in Association affairs?

Over the years, there have been several resolutions to abolish the Life Counsellorship, even the College of Counsellors itself, and the heated debate has involved deeply held convictions.

The age-old arguments on both sides of this question would fill volumes. Governments have been debating the question of age and experience vs. youth and vigor at least since classical Greek times. It was, after all, the Greek heritage that gave us the word Nestor, for wise old counsellor. (Nestor was the respected king of Pyros who, although laden with years, joined the Greek expedition against Troy and gained further notice of his wisdom and daring.)

In a poll to be mailed to every member soon, you will be asked to express your views on the advantages/disadvantages of continuing the Life Counsellor system. (No one proposes changing the status of *present* Life Counsellors.)

At its regular monthly meetings in July and August, the Board of Censors directed that the poll of the membership be taken to guide the Board in a question that does not lend itself to an easy answer. As soon as you take the position, for example, that the spirit, energy and enthusiasm of younger leaders are worth more than the wisdom of the older ones, you find yourself turning right around and arguing the exact opposite. (The Founding Fathers of this country hedged their bet: they conferred the Nestorian concept on the Senate and the Alexandrian or Periclean one on the House.)

After Dr. Hill's message has been read and digested and after due notice that the poll is coming has appeared in *The Alabama M.D.*, the immediately following issue of the *M.D.* will contain the poll.

The Board hopes for broad participation to provide a statistically significant sample of membership opinion. With that in hand, the Board will have a better idea of how to proceed, for it is every Board member's often expressed belief that wider participation in the affairs of the Association is needed; that more, not less, wisdom is needed—and now more than ever before.

I, of course, do not have an opinion. My studied neutrality is the only appropriate role for the Executive Director. But that role comes quite naturally in this instance: I simply could not make up my mind if the choice were mine to make.

More than 350 years ago, a writer of some note summarized the arguments he had heard on youth and age:

*Continued on page 8*





Luther L. Hill, M.D.  
President

## *Counsellors and Delegates*

The roses this month go to those Life Counsellors who continue to maintain an active interest in their Association.

Life Counsellors are a special group. They must have manifested an interest in their Association and must have demonstrated qualities of leadership to have been elected Active Counsellors. After serving for 20 years and having been re-elected to this office three or four times, they have become Life Counsellors.

The duties of an Active Counsellor are to render unqualified and unstinted allegiance to the Association among other things and to attend at least two out of every three Annual Sessions of the Association. Many Active Counsellors become president of the Association and are chairmen or members of numerous councils and committees.

Life Counsellors are relieved from their obligation to attend two out of three Annual Sessions, but a number continue to do so and the Association greatly benefits from their past experience.

The following Life Counsellors were in attendance at the 1978 Annual Meeting. This is taken from the last Transactions that have been published.

Adams, M. Vaun<sup>1,2</sup>, Mobile  
Barnes, J. M.<sup>2</sup>, Montgomery  
Carmichael, J. L., Birmingham  
Chenault, John<sup>2, 3, 7</sup>, Decatur  
Cowart, N. E.<sup>4</sup>, Huntsville  
Daves, Pop<sup>1, 2</sup>, Cullman  
Galbraith, J. G.<sup>1, 2</sup>, Birmingham  
Givhan, Edgar<sup>1</sup>, Birmingham  
Glenn, E. B.<sup>1, 3</sup>, Birmingham  
Hill, L. L.<sup>2</sup>, Montgomery  
Little, Joe<sup>5</sup>, Mobile  
Owings, W. J. B.<sup>6</sup>, Brent

Parker, Robert<sup>2</sup>, Montgomery  
Robinson, E. B.<sup>1, 3, 7</sup>, Birmingham  
Shell, J. R., Abbeville

### Symbols:

- <sup>1</sup> Past President
- <sup>2</sup> Former Member, Board of Censors
- <sup>3</sup> Delegate to AMA
- <sup>4</sup> Actively Served on Insurance Committee
- <sup>5</sup> Served on Committee on Legislation and Committee on Medical Service and Public Relations
- <sup>6</sup> Committee on Finance
- <sup>7</sup> Served as Chairman of the following Committees:  
Committee on Medical Care for Industrial Workers  
Liaison Committee, UMWA Medical Care Program  
Committee on Anesthesiology  
Alabama Hospital-Medical Council  
Grievance Committee  
Served as a Member of the following Committees:  
Committee on Finance  
Grievance Committee  
Hospital Licensure Advisory Board

Of this group almost one half have been president of the Association and almost one half have been members of the Board of Censors. The collective time served on the Board of Censors is about 80 years.

During the preceding year 1977, 13 Life Counsellors attended the Annual Session in Mobile as follows:

J. H. Baumhauer, Mobile<sup>4</sup>  
J. O. Belue, Athens  
J. L. Carmichael, Birmingham  
J. M. Chenault, Decatur<sup>2</sup>  
Pop Daves, Cullman <sup>1, 2</sup>  
E. B. Glenn, Birmingham<sup>1, 3</sup>  
John Martin, Montgomery<sup>1</sup>

Paul Nickerson, Sylacauga  
W. J. B. Owings, Brent<sup>7</sup>  
Robert Parker, Montgomery<sup>2</sup>  
D. R. Ramey, Jr., Greensboro<sup>8</sup>  
J. R. Shell, Abbeville  
S. J. Williams, Livingston<sup>5</sup>

- 
- <sup>1</sup> Past President
  - <sup>2</sup> Member, State Board of Censors
  - <sup>3</sup> Delegate to AMA
  - <sup>4</sup> Committee on Insurance
  - <sup>5</sup> Board of Trustees
  - <sup>6</sup> Committee on Rural Health  
Committee on Medical Services and Public Relations
  - <sup>7</sup> Committee on Finance
  - <sup>8</sup> Committee on Veteran Affairs

Of the 13, five were from Birmingham, Mobile or Montgomery and the remaining eight were from the smaller communities. Five were either past presidents or members of the State Board of Censors. All of these except one was actively working in health-related activities. Ten of the thirteen also attended the Annual Session the preceding year, 1976, in Montgomery.

Those Counsellors who continue to attend the Annual Sessions and give us the benefits of their experience deserve special recognition and great respect.

There has been a more or less continuous effort to disenfranchise Life Counsellors for the last six years or since 1973. This has continued through numerous Constitution and Bylaws Committees, at least two Reference Committees, before the Board of Censors six or eight times and before the House of Delegates and College of Counsellors through the revision of the Constitution and Bylaws.

The last revision allowed the roll of the Life Counsellors to remain unchanged. The Board of Censors has devoted 50 or 60 man hours discussing this subject since the June 1979 meeting.

There are several members on the Board who feel strongly the membership of the Association should be polled and the majority of the Board concurs in this poll. The fear is that the presence of the large number of Counsellors in the large communities intimidates some members and causes them to be reluctant to participate in the activities of the Association.

Your President thinks this is absurd and wonders if such a skeptical member votes in the state and national elections.

At any rate, a review of the representation has been made and the following is presented to clarify the situation.

The latest Transactions of the Annual Meeting are used. They are for the 1978 Meeting in Huntsville and we have:

No. of Members	District	Allotted Delegates	Allotted Active Counsellors	Proportion of Members To Counsellors And Delegates	Life Counsellors Registered	Proportion of All Representatives To Members
266	IV	28	9	7.2	1	7.0
318	III	27	9	8.8	0	8.8
349	VII	23	10	10.6	1	10.3
437	II	28	13	10.7	4	9.7
463	V	17	14	14.9	2	14.0
485	I	20	14	14.3	2	13.5
1,075	VI	16	31	22.9	5	20.7
3,393		159	100	13.1	15	12.4

In 1978, then, in District IV, one representative, either a Delegate or an Active Counsellor must represent 7.2 members of the Association or if the Life Counsellors attending the meeting are counted, there is one representative for each seven members. While in District VI, in Jefferson County, one active Counsellor or Delegate represents 23 members or if the Life Counsellors are added, there is one representative for 21 members.

It must be crystal clear to anyone then that a representative from an area with a smaller number of doctors has a much greater voice in Association affairs than does the representative from a larger doctor population area. When District IV with the smallest number of members is compared to District VI with the largest number, the bias is three-to-one in favor of the more rural area. It is also true that as the physician population increases, the bias changes progressively. It is also true that if the Life Counsellors are counted as representatives, the prejudice in favor of the smaller member population areas still remains about three to one. The smallest physician population area, District IV, has three times the relative strength of Jefferson County's District VI.

In any Constitution change concerning representation, the one man-one vote rule should be adhered to. This would mean a change in the method of allocating Counsellors and Delegates so that Jefferson and Mobile Counties would not be discriminated against. It would mean a considerable increase in their Counsellors and/or Delegates while the smaller Districts would have theirs decreased.

Let's look at the quality of the representation. The Active Counsellors must attend two out of three Annual Sessions to maintain their Counsellorship — this gives a lot of experience and continuity to the College of Counsellors.

The Delegates are elected by the county societies or appointed by their presidents. This term is usually for one year only and they as a group cannot have comparable know how.

*continued on page 9*





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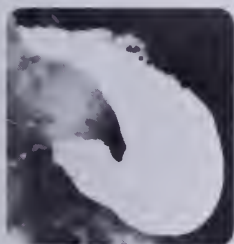
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\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

**Reference:**

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Final classification of the less-than-effective indications requires further investigation.

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Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water). Bentyl 20 mg: *Adults:* 1 tablet three or four times daily. Bentyl Injection: *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

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Continued from page 2

"Young men think that old men are fools, but old men know young men are fools."

Who has forgotten what the beloved Mark Twain wrote about the young man who left home hurriedly in his teens, certain his father was a fool, and returned just a few years later to marvel at how much the old man had learned in the interim.

The Philosopher Schopenhauer wrote:

"The first forty years of life gives us the text; the next thirty supply the commentary." (But he was in his 60s before he decided that.)

Sir William Osler, who heads almost everyone's list of great physicians of the last 100 years, spoke in his younger teaching years of the desirability of shooting all men over 40. He had eaten those words many times over long before his death at 70.

But whatever side you find yourself on in the poll, perhaps all of us can agree, sooner or later, with the summation on the endless debate by Euripides in the 5th Century before Christ:

"If we could be twice young and twice old, we could correct all our mistakes."

*S. Lon Conner*  
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There were 14 registered Delegates attending the Annual Session in Birmingham this year who were not even in the 1978 Roster. Many of these Delegates were attending the Annual Session for the first time and were present in order to attend the orientation course to learn something about their Association.

They would hardly be expected to make reasonable representatives for the members back home. Those of you who have attended these College of Counsellors and House of Delegates' meetings realize that during the first years a Delegate hardly realizes what is going on.

I think that it is also significant that of the 159 allotted Delegates, only 81 registered at the Birmingham meeting in 1979—50%. If the 14 places filled by those not on the membership Roster for the preceding year were deleted from the registered group, we have a figure of 159 allotted Delegates and 67 registered Delegates—a dismal representation of 42%.

At the Annual Session in Birmingham in 1979, the counties of Autauga, Barbour, Bibb, Bullock, Butler, Chambers, Choctaw, Clay, Conecuh, Dale, Dallas, Hale, Henry, Lamar, Lee, Lowndes, Marengo, Perry, Pike, St. Clair, Shelby, Walker, Wilcox and Winston had *no* Delegates representing them. While Baldwin, Blount, Chilton,

Cleburne, Coffee, Escambia, Etowah, Fayette, Geneva, Greene, Houston, Macon, Marion, Monroe, Montgomery, Pickens, Randolph, Sumter and Washington had only *one* Delegate to represent them. Every county has two or more Delegates allotted. Even when the host city was Birmingham, Jefferson County authorized 16 Delegates had only ten registered.

Your President feels that what we need is stimulation of interest in the Association. We need more participation from the members. We need to face up to our problems. We do not need despair. We need help from everyone.

It seems to your President it would be a real crime for us to deny ourselves the interest and counsel of an experienced group—such as the Life Counsellors because of a misconception.

It does not seem rational for a Delegate, particularly from a low doctor density area to feel overwhelmed by the Counsellors, either Active or Life. Their existence is no real reason for a Delegate to lack interest or fail to participate in the activities of the Association.

There will be a Poll in an early M.D. to evaluate your feelings. Please participate in this Ballot.

*Luther Hill*

## An apple a day won't keep alcoholism away!

The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

Do you have a patient who needs this kind of help? You probably do because the illness is sneaky. For more information and guidelines on how to identify these patients, write to us.

*Willingway Hospital*

311 JONES MILL ROAD  
STATESBORO, GA. 30458

(912) 764-6236

J.C.A.H. ACCREDITED



# ALDORIL<sup>®</sup>

containing methyl dopa and hydrochlorothiazide

## TABLETS

### ALDORIL<sup>®</sup> -25

containing 250 mg ALDOMET<sup>®</sup> (Methyl dopa, MSD)  
and 25 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

## TABLETS

### ALDORIL<sup>®</sup> -15

containing 250 mg ALDOMET<sup>®</sup> (Methyl dopa, MSD)  
and 15 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

## TABLETS

### ALDORIL<sup>®</sup> D30

containing 500 mg ALDOMET<sup>®</sup> (Methyl dopa, MSD)  
and 30 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

## TABLETS

### ALDORIL<sup>®</sup> D50

containing 500 mg ALDOMET<sup>®</sup> (Methyl dopa, MSD)  
and 50 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

Merck Sharp & Dohme, Division of  
Merck & Co., Inc., West Point, PA 19486

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**MSD**

**MERCK  
SHARP  
DOHME**

J9AR13

# Quinamm<sup>TM</sup>

AVAILABLE ONLY ON PRESCRIPTION

## Brief Summary

**INDICATIONS:** For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

**CONTRAINDICATIONS:** Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

**PRECAUTIONS:** Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication. Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

**ADVERSE REACTIONS:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

## DOSAGE AND ADMINISTRATION:

1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

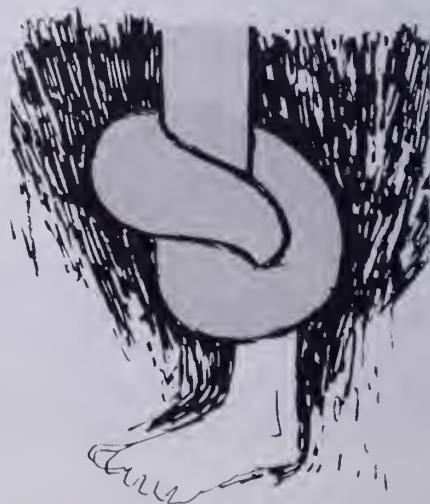
U.S. Patent 2,985,558

# Merrell

MERRELL-NATIONAL LABORATORIES Inc  
Cayey, Puerto Rico 00633

Direct Medical Inquiries to  
MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc.  
Cincinnati, Ohio 45215, U.S.A.

Licensors of Merrell<sup>®</sup>





for Knotts in the night



# Quinamm<sup>TM</sup>

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

## specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease... consider Quinamm... simple, convenient dosage—usually just one tablet at bedtime... can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.

# COMPATIBILITY



## Does it influence your choice of a peripheral/cerebral vasodilator\*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

**\*Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

**Composition:** Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

**Dosage and Administration:** Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

**Contraindications and Cautions:** There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

**Adverse Reactions:** On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

**Supplied:** Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose, Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose, Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls

U.S. Pat. No. 3,056,836

# VASODILAN<sup>®</sup>

(ISOXSUPRINE HCl)  
20-mg tablets

**Mead Johnson** PHARMACEUTICAL DIVISION

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# The Emergence of Emergency Medicine

by

T. Riley Lumpkin, M.D.\*

With the assistance of:  
Charles F. Warren, Ph.D.†

Nearly 450 health care personnel from throughout the Southeast were seated in the theatre of the Ferguson Center on the Tuscaloosa campus of The University of Alabama. They were assembled for the start of the first day's program of the Emergency Medical Care Symposia '79 conference, which was held 9-11 May 1979.

The conference consisted of three interdependent symposia: a cardiovascular symposium (9 May), a toxicology symposium (10 May), and a trauma symposium (11 May).

A fourth related symposium—the behavioral emergencies symposium held on 28 June—concluded the

Emergency Medical Care Symposia '79 series.

In all, nearly 600 people—physicians, nurses, health care administrators, residents, students, and emergency medical technicians—came to Tuscaloosa during May and June to participate in program presentations made by a very distinguished and diverse faculty, each having been recruited from medical institutions and agencies from across the nation.

Perhaps the most remarkable feature of this conference phenomenon was that the Symposia '79 series (the first in what promises to be a highly-subscribed annual event) was sponsored, coordinated, and staffed by the College of Community Health Sciences' newest academic department—the Department of Emergency Medicine.

The nascent medical specialty called emergency medicine rapidly is coming of age. In 1977 the College of Community Health Sciences cooperated with West Alabama Emergency Medical Services, Inc. (a local agency funded under the aegis of the federal EMSS Act of 1973) to provide training for emergency

medical technicians, including paramedics, drawn primarily from the West Alabama region.

By the start of this past academic year (1978-79), this cooperative arrangement had given way to a fully-operationalized academic department consisting of seven faculty members (three part-time M.D. appointments, one half-time M.D. appointment, one full-time M.D. appointment, one full-time Ph.D./EMT for curriculum and administration and a full-time paramedic EMT), three of whom hold full-time instructional appointments within the Department.

Although the education of emergency medical technicians still forms a central role played by the Department of Emergency Medicine, other key responsibilities have been assumed under the leadership of Dr. Phillip K. Bobo, Chairperson and Assistant Professor.

The faculty of instruction now oversee all clerkships in emergency medicine. These emergency medicine clerkships—an integral part of the College's clinical program for medical students—afford the medical student the occasion to reaffirm principles of diagnosis and

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\*Interim Dean, College of Community Health Sciences, The University of Alabama

†Assistant Professor and Coordinator of Curriculum and Instruction, Department of Emergency Medicine, College of Community Health Sciences, The University of Alabama

management, especially as they pertain to the trauma patient.

Equally important from the standpoint of departmental faculty are the expanded and on-going occasions for instruction, guidance, and performance analyses of residents undertaking the required core rotation in emergency medicine as part of the College's Family Practice Residency Program. The emergency medicine rotation guidelines, as drafted by the department's faculty, stress that the rotation is intended to help the resident to become skilled in the triage of emergency department patients, to intervene immediately in life-threatening situations, to develop an understanding of the definitive management of the patient, and to work with emergency medical technicians during both the pre-hospital and initial hospital phases of emergency care.

An emergency medicine rotation elective for senior residents also has been implemented. The emergency medical clerkships and rotations, cooperative arrangements primarily based at one of the state's busiest departments (i.e., in Tuscaloosa's Druid City Hospital), have afforded the College's medical students and residents (as well as those from other institutions) the benefits of a truly instructive, modern, and comprehensive medical education program.

## Paraprofessionals Too

The curricular offerings of the Department of Emergency Medicine not only serve medical students and residents. The faculty's commitment to emergency medicine has resulted in the development and implementation of curricular offerings designed to furnish a learning experience for those contemplating or desiring a career path as emergency medical care paraprofessionals.

Consequently, effective with the University's Fall 1979 semester, the Department will begin its university undergraduate courses of instruction in emergency medical care. Aimed at several potential undergraduate student populations, the courses already have seen pre-registration rosters that include pre-med majors, nursing students,

behavioral science majors, health care management students, and several other students from the University's many schools and colleges.

Undergraduate students may opt to include an academic minor in emergency medical care within their programs of study, or they may wish only to include these courses as electives. The undergraduate courses (varying in credit from one to six semester hours) now being offered by the Department of Emergency Medicine range from the theoretical to the clinical, including among them: Introduction to the Purposes, Practices, and Philosophies of Emergency Medical Care; Basic Life Support Treatment Modalities; Seminar in Current Issues and Practices for Emergency Medical Technicians; Advanced Life Support Treatment Modalities; Paramedic EMT Instruction; Pharmacology in Emergency Medical care; Advanced Seminar in Emergency Medical Care.

Already the existence of, and the favorable response to, these courses ensure that the Department of Emergency Medicine and the College of Community Health Sciences will contribute dramatically and effectively to the formal education of emergency medical care personnel both within Alabama and the Southeast.

One further significant category of educational activities being undertaken by the Department of Emergency Medicine deserves final mention. Activities centered on the formal education of emergency medical care personnel indeed constitute an important portion of the Department's efforts.

However, the demand by public groups and individuals for information and learning experiences related to emergency medical care extends far beyond the classroom or the emergency room. The Department of Emergency Medicine, therefore, conducts a sizeable number of outreach, public information, and continuing education programs.

## Demonstration Visits

This past academic year alone saw its faculty coordinate and teach an

array of educational activities serving various groups and citizens of Alabama. Public information programs concerning the nature and practices of emergency medical care were offered. Demonstration visits (complete with rescue helicopters and rescue vehicles) systematically were made to grammar schools in the west Alabama region. Poison prevention and education lectures also were given by the faculty to school children and parent groups.

Outreach efforts were effected on behalf of research in bio-medical engineering experimentation to aid in trauma diagnosis; similar efforts were expended to help refine the state's emergency medical technician training and licensing provisions.

Continuing education activities were broad-based: five instructional offerings in advanced life support treatment modalities for several Alabama physicians, nurses, and emergency medical technicians; three ten-week workshops—psychiatric nursing, ICU/CCU nursing, and ED nursing—for emergency medical care nursing personnel; lecture modules on emergency department protocols presented to personnel at three Alabama hospitals' a mini-course on triage nursing; and, of course, the four full-day programs that constituted the already mentioned Emergency Medical Care Symposia '79 series.

## Birth Long-awaited

The State of Alabama has long awaited the birth of emergency medicine. Well-trained and informed emergency medical care personnel are needed at every level of service and in nearly every health care institution within the state, whether or not the facility is located in an urban setting or in one of the very many rural areas of Alabama.

A clear and strong commitment to a high quality education for emergency medical care professionals and paraprofessionals, as well as to the information and service needs of the citizens of Alabama, already has begun with the emergency of emergency medicine at the College of Community Health Services.



# What's happening here?



☐ Tissue Committee    ☐ Surgical staff    ☐ Record Review

☒ Mutual Assurance Claims Committee Meeting

Nobody knows more  
about Alabama  
physicians than  
Alabama physicians.



**Mutual  
Assurance**

# DIGEST OF ACTIONS OF THE STATE COMMITTEE OF PUBLIC HEALTH

The following actions were taken by the State Committee of Public Health at its meeting on Aug. 15, 1979:

- Confirmed the joint hearing with the Emergency Medical Services Advisory Board for the September meeting and the public hearing on Sept. 19, 1979, at 1:30 p.m. in the auditorium of the Highway Department, for consideration of proposed revision to Rules, Regulations and Standards, Emergency Medical Services.

- Referred, for study and recommendations, a question of hospital utilization of Emergency Medical Technicians to the EMS Advisory Board.

- Confirmed a public hearing, for B & T Ambulance Service of Boaz for revocation of their operator's license, for Sept. 19, 1979, and confirmed the date for consideration of the revocation of EMT-Basic License—Tim Dempsey, for the September Committee meeting.

- Received information of the transfer of the State Health Planning and Development Agency personnel, from the Health Department to the Governor's Office, effective Aug. 1, 1979, and of the transfer of appropriate matching funds of \$201,000.

- Was advised of the agreement with the Governor's Office to continue review of 1122 until the SHPDA function is ready to assume this responsibility on Oct. 1, 1979, and of the federal concurrence in this action.

- Confirmed initial issuance of Assurance of Need for 21 health facilities.

- Extended the Assurance of Need for Springhill Memorial Hospital, Mobile, through October 1979.

- Approved with favorable findings and recommendations, a cost overrun for Mobile Infirmary, Mobile, and approved a parking deck project for the University Medical Center, Birmingham, for a facility that would be primarily financed from revenues from users of the facility.

- Delayed for one month's consideration of a change in regulations dealing with the dating of milk and milk products for clarification and better communication.

- Received a report on legislative action from the 1979 Regular Session of the Alabama State Legislature.

- Received a report from the Council on Dental Health and notice of the election of Roy R. Kracke, D.M.D., Birmingham, as Chairman of the Council to succeed Vance R. Kane, D.M.D., on and after January 25, 1980.

- Received notice from the Council on Animal and Environmental Health of the election of Paul Schnurrenberger, D.V.M., to succeed Lee M. Russell, D.V.M., for a term beginning January, 1980.

- Received information regarding the withdrawal from the market of Neo-Mull-Soy (Syntex) for formulation change.

*Continued on page 25*

## Tenuate® <sup>®</sup> IV

(diethylpropion hydrochloride NF)

## Tenuate Dospan®

(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychological dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecomastia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSEAGE:** Manifestations of acute overdose include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdose.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc  
Cayey, Puerto Rico 00633

Direct Medical Inquiries to  
MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc  
Cincinnati, Ohio 45215, U.S.A.

Licensors of McCrell®

**References:** 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hockenga, M.T. O'Dillon, J.R.H. and Leyland, H.M. A comprehensive review of diethylpropion hydrochloride. In: Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp. 391-404.

# Merrell



**Overweight may not always be simple...  
complications can develop\*.**

**Complicated or not...**

# **Tenuate® Dospan®<sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

## **In uncomplicated overweight.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

\*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

# **Merrell**

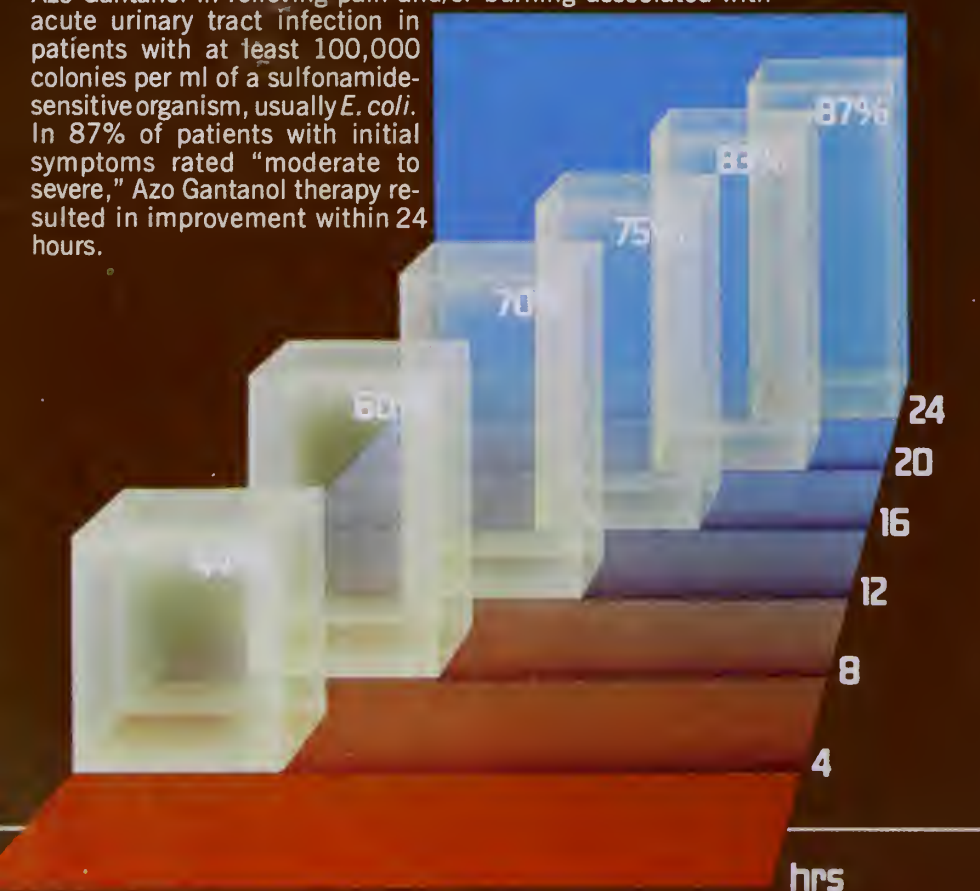


For prescribing information see opposite page.

## Important data on the pain of acute cystitis:

# In 87% of patients studied (303 of 349), Azo Gantanol® reduced pain and/or burning within 24 hours\*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

# Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for  
the pain

for  
the pathogens

Before prescribing, please consult complete product information, a summary of which follows:  
**Indications:** In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the acute painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought.

After relief of pain has been obtained, continue treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the orange-dye (phenazopyridine HCl) will color the urine.

**Supplied:** Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.



Roche Laboratories  
Division of Hoffmann-La Roche  
Nutley, New Jersey 07110



# Group A beta Hemolytic Streptococcal in Varicella

**Vincent A. Carnaggio, M.D., F.A.A.P.**  
**A. Charles Money, M.D., F.A.A.P.**  
**Howard H. Bearman, M.D., F.A.A.P.**  
**David J. Fugazzotto, M.D., F.A.A.P.**

16 North Oporto-Madrid Boulevard  
Birmingham, Alabama 35206  
205 836-8691

Correspondent: David J. Fugazzotto, M.D.

Secondary bacterial infection is the most common complication of varicella. Beta streptococcal septicemia during the course of varicella infection was encountered in two young patients who presented with signs of acute osteomyelitis, and septic arthritis, respectively.

Case 1. E.A., a twenty month old white male presented at the East End Memorial Hospital emergency room on Jan. 20, 1977 with varicella, temperature of 41.1 C. (106 F.), and a painful left ankle. He was in his fifth day of varicella, and had refused to walk for the previous 24 hours because of ankle pain. Exam revealed an apprehensive, toxic appearing child with widespread varicella lesions, nearly all of which were in pustular, or crusted stages. Several of the lesions appeared infected, bearing a large pustule and an inflammatory halo of up to 1 cm. in diameter. Present over the left lateral malleolus was a 2 x 3 cm. of erythema and tenderness. The ankle was swollen and the patient would not bear weight, because of pain. The nearest varicella lesion was 2 cm. from the margin of erythema.

Cultures of blood, nasopharynx, and a pustular varicella lesion were taken, and the patient was started on intravenous methicillin for suspected osteomyelitis.

Admission CBC values: WBC 23,300 with 68% polymorphs, 13% band forms, 11% lymphocytes, 8% monocytes, Hgb. 10.9 gms, Hct. 31.3% and 2 nucleated RBC/100 WBC.

X-rays of the affected ankle were normal, and a Technetium 99m bone scan was negative. Hospital course: The patient became afebrile on the second

hospital day, and at the same time, the blood culture and pustule culture were positive for beta hemolytic streptococcus, Group A. By the fourth day, the ankle erythema and swelling had subsided, and the child was able to ambulate normally on the fifth day. Because of the rapid clinical improvement, and lack of bone involvement by scan, the intravenous methicillin was changed to oral penicillin V. This was continued after discharge for a total of fourteen days. Follow-up roentgenograms of the ankle were negative three weeks and again three months after discharge. He has continued to do well as of one year after his illness.

Case 2. J.T., a three year old white male, had onset of varicella on March 17, 1977. On March 20, his rash became widespread, and he developed swelling of his right knee. The latter was felt to be the result of trauma while being lifted from a chair the previous evening. Because of further swelling, pain, and fever of 40.6 C. (105 F.), he was brought to the East End Memorial Hospital emergency room.

Exam revealed an ill appearing boy in mild discomfort, holding his right knee at about 30 degrees flexion. He had a moderate number of varicella lesions, most of which were papular or pustular. Several on the face had large halo of erythema around a large pustule. The right knee was swollen and moderately tender, but was neither red nor hot. There was definite fluid in the suprapatellar bursa, and a slightly ballottable patella. He resisted extension of the knee and would not bear weight. The patient also had a left otitis media.

Laboratory work in emergency room consisted of CBC, blood culture, and culture of a large pustule from the face. The white count was 10,800/cu mm, with 9% Band forms, 64% polys, and 27% lymphocytes. Hemoglobin was 12.1 gm, and hematocrit 33.5%.

After an initial injection of 600,000u procaine penicillin, the patient was started on oral penicillin for the otitis media and infected varicella. Since there was still a question of trauma as the cause of the knee effusion, he was re-examined at the office 48 hours later. At this time, his temperature was 37.6 C (100 F), he felt better, and the otitis showed some improvement. However, the knee was more swollen with definite joint and bursa fluid. The laboratory reported gram positive cocci in the blood culture, which was subsequently identified as beta hemolytic streptococcus, Group A. The child was admitted to the hospital for possible septic arthritis, and started on intravenous penicillin. Roentgenograms of the knee were normal except for the evidence of joint fluid. Bone scan was also negative. Aspiration of the joint yielded 60cc of turbid, straw colored fluid with a WBC count of 27,500/cu mm; 94% polys and 6% mononuclear cells. Gram stain revealed no organisms, and cultures were negative for bacteria, including AFB, and fungi. Viral cultures were not done on joint fluid. He improved rapidly on IV penicillin, and was ambulatory on the fifth hospital day with no joint swelling. He was discharged on the seventh day, on oral penicillin V. Follow-up examinations were normal at 4, 5, and 7 months after discharge.

### Discussion:

Case 1. was apparently one of cellulitis with secondary hematogenous spread of the strep organism. This is differentiated from varicella gangrenosa (2) which extends from the dermis disrupted by the varicella lesion itself. In this boy, there were no lesions within the erythematous area. Recovery followed early, vigorous antimicrobial therapy.

Case 2. had a monoarticular arthritis. This patient received penicillin therapy for 48 hours prior to joint aspiration. This could have prevented bacterial growth in the synovial fluid which did have a bacterial type cell count (94% polys). Monoarticular arthritis caused by the varicella virus does occur, but it is rare<sup>3,4</sup>. Although the synovial fluid cultures did not permit a distinction between bacterial and viral etiology, the rapid resolution without need for repeated joint aspiration and absence of roentgenographic changes on followup make a true varicella arthritis a possibility. The presence of concomitant streptococcal sepsis in this boy

was, then coincidental, and could have come either from the otitis media, or the secondarily infected varicella lesions.

### Summary:

Two cases are presented in which osteomyelitis and septic arthritis were suspected during the course of varicella. Blood cultures from both children grew Group A beta hemolytic streptococcus, and workup failed to show bone or joint infection. Rapid clinical response followed antibiotic therapy. These cases emphasize the importance of considering sepsis in the child with varicella, whose clinical course appears atypical.

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# A reminder

## ZYLOPRIM<sup>®</sup>

### (allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

**INDICATIONS AND USE:** This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim<sup>®</sup> (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

**CONTRAINDICATIONS:** Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

**Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.**

**WARNINGS:** ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy particularly in patients with pre-existing liver disease. Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol<sup>®</sup> (mercaptopurine) or Imuran<sup>®</sup> (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

**Usage in Pregnancy and Women of Childbearing Age.** Zyloprim<sup>®</sup> (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

**PRECAUTIONS:** Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

#### ADVERSE REACTIONS:

**Dermatologic:** Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

**Gastrointestinal.** Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

**Vascular.** There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angitis which have led to irreversible hepatotoxicity and death.

**Hematopoietic:** Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim<sup>®</sup> (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

**Neurologic.** There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

**Ophthalmic:** There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yu for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

**Drug Idiosyncrasy:** Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

**OVERDOSAGE:** Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

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# Physicians Needed for Consultative Examinations

by  
**JOHN A. SHELTON\***

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During the fiscal year ending Sept. 30, 1978, the Alabama DDS requested more than 24,000 consultative examinations. We pay for the CEs in accordance with a statewide fee schedule. The total cost for consultative examinations in FY 1978 was

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\* Director, Division of Disability Determination, State of Alabama.



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## DIGEST OF ACTIONS OF THE STATE COMMITTEE OF PUBLIC HEALTH

*Continued from page 16*

- Received a report on the unusual instance of St. Louis Encephalitis including one case in Jefferson County and a presumptive death. There are 26 suspects and 38 doubtful reports state wide.
- Received a report on DPT vaccine reaction in two infants in Tuscaloosa County which were time-associated with the receipt of vaccine.
- Approved a letter to Alabama physicians urging early compliance with the School immunization law which was extended to Junior High and High Schools effective immediately.
- Approved a policy statement urging compliance with that law, as rapidly as possible, and urging students to utilize their private physician until adequate vaccine and personnel are available to assist the Department of Education, prior to full implementation before the next school year begins in 1980.
- Received advice of the new federal requirements for Federal Public Health Service funds and the loss of the use of these funds for branch laboratories. The State Health Officer was instructed by the Committee to prepare a proposal for the phasing out of facilities and the continuation of services provided in remaining facilities.
- Received advice of the transfer of the Central Laboratory to its new facilities on the Auburn University in Montgomery campus and of negotiations for renovation of the old laboratory building to office space as an economy and cost containment measure, consolidating Health Department staff in a more central location.

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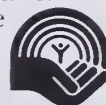


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# Booze and Blood

**Thomas W. Sheehy, M.D.**

Alcoholism is fourth among the nation's health problems; it is outranked only by heart disease, cancer, and mental illness. Aside from socio-economic problems, alcoholism may induce a variety of other diseases, including significant anemia, leucopenia, thrombocytopenia, or a combination of these.

Its hematological complications may be striking, sometimes even fatal. The purpose of this review is to discuss the pathophysiologic effects of alcohol on the blood system and to review the clinical sequelae of these effects.

Almost a century has past since Gram first observed and described impaired hematopoiesis in alcoholics with liver disease. Since then, our knowledge of the effects of alcohol on the blood system has expanded greatly. Table 1 refers to some of the key observations which have contributed to that knowledge.

Bianca's observations (1937) that alcohol depressed hematopoiesis in poorly nourished individuals gave rise to the belief that alcohol, liver disease, and poor nutrition combined to impair bone marrow function.<sup>1</sup>

Jandl's studies (1935) led him to suggest that alcohol was a bone marrow toxin. This belief was based on the striking reticulocyte response observed in five anemic, cirrhotic patients deprived of alcohol.<sup>2</sup>

The studies of Herbert and his associates focused attention on folate deficiency as a major cause of alcoholic-induced anemia<sup>3</sup>.

## Folic Acid Metabolism and Alcoholism

The rosetta stone that helped to unravel the relationship between alcohol and folate metabolism was the observation that physiological doses (50-100 ug) of folic acid would cure a megaloblastic anemia due to deficiency of this vitamin<sup>4,5</sup>. Utilizing a folate deficient diet, Herbert and Sullivan monitored the effect of alcohol on folate metabolism<sup>6</sup>. They showed that alcohol could stop an erythropoietic response to physiological doses of folic acid in alcoholics with megaloblastic anemia.

In a classic study, an alcoholic volunteer with megaloblastic anemia was given a low

---

\*Professor of Medicine, University of Alabama School of Medicine; and Chief, Medical Service, Veterans Administration Hospital, Birmingham, Alabama



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**TABLE 1**  
**ALCOHOL AND HEMATOPOIESIS**

1884—Gram — Impaired Hematopoiesis
1907—Talley — Impaired Hematopoiesis
1937—Bianco — Nutritional
1955—Jandle — Toxin
1963—MacFarland — Leucopenia Libre
1964—Sullivan — Folate Metabolism Herbert
1969—Lindenbaum — Vacuolation — Thrombocytopenia Lieber

folate diet (5 ug) plus physiologic doses of folic acid, 75 ug, daily. On four separate occasions, the supplemental folic acid induced a reticulocytosis and caused a reversion of the patient's megaloblastic hematopoiesis to normal, only to have its effects reversed when the patient was given a daily ration of alcohol. (Figure 1). In other volunteers, the repressive effect of alcohol on the bone marrow could be overcome, if large increments of folic acid, i.e., greater than 150 ug, were ingested daily.

Alcohol appeared to have two effects on erythropoiesis. It interfered with folate metabolism, hence, the reversion to megaloblastosis despite an adequate folic acid intake and it suppressed erythropoiesis directly, hence, the reticulocytosis that occurred with abstinence.

#### Precipitous Decline

Alcohol also interferes with the tissue supply of folic acid. Eichner and Hillman showed that in man and experimental animals, the serum folate level fell rapidly after parenteral or oral administration of modern amounts of alcohol and despite the presence of adequate tissue stores of folate<sup>7</sup>.

In alcoholics with borderline or marginal levels of folate, the decline in folic acid serum levels was even more precipitous, occurring within 8 to 24 hours. There was no excess excretion of folic acid in the urine or feces.

This raised the question, "How does alcohol cause a fall in serum folate?" Hillman and his associates showed that the decrease in folic acid resulted from impairment of the folic acid enterohepatic cycle.<sup>8</sup>

Normally, after the vitamin is absorbed, a small amount is stored within the liver and the remainder is excreted via the bile into the gut where it is absorbed again. This cycle is important in maintaining serum folic acid levels.

Alcohol causes a sharp decline in the excretion of biliary folate and it traps large amounts of folate in the liver as monoglutamate and pentaglutamate. As a result, little biliary folate reaches the bowel, therefore, the amount absorbed is decreased and the serum levels fall.

Alcohol also has a significant effect on intestinal morphology. Figure 2 shows the macrocytic jejunal crypt cells observed with folate deficiency. These megaloblastic changes disappear rapidly with folate repletion. Alcohol also impairs intestinal absorption and can induce steatorrhea. In one study it led to impaired absorption of Xylose and of Vitamin B-12 in over 50% of a monitored group of alcoholics<sup>9-10</sup>.

In summary, alcohol interferes with folate metabolism, transport, absorption, and utilization. Table 2 outlines the relationship between alcohol and folate depletion. Alcohol accelerates the development of megaloblastosis only when folate stores are nearly depleted; it rapidly lowers serum folate levels through its ability to impair the enterohepatic folate cycle, even when tissue stores of folate are adequate.

These studies provided a great deal of information about the effect of alcohol on folate metabolism, but they did not clarify the role of alcohol per se on hematopoiesis. To determine this, Lindenbaum and Lieber fed a group of volunteers a nutritious diet containing adequate protein, minerals, and vitamins, plus pharmacological doses of both folic acid and pyridoxine<sup>11</sup>.

Over a period of 63 days, the alcoholic intake of their volunteers was increased until it comprised from 40 to 65% of their daily caloric intake. The only major hematological effects noted were vacuolation of erythroid and myeloid precursors, a rise in serum iron levels, and the appearance of thrombocytopenia in four of nine volunteers. In the presence of adequate nutritional support, alcohol failed to induce either megaloblastic or sideroblastic changes.

Figure 3 shows a typical vacuolated megaloblast. The vacuolation of red and white cells is dose-related. Usually such vacuolization appears after several weeks of alcoholic consumption. The nature of the vacuoles is uncertain. They



are thought to represent alcohol soluble lipids that accumulate due to deficiency of alcoholic dehydrogenase.

### Alcohol And Iron Metabolism

Alcohol impairs iron as well as folate metabolism, and may cause a reversible sideroblastic anemia. The sideroblastic or "iron-loading" anemias are a diverse group of hereditary and acquired disorders characterized by a hypochromic or dimorphic anemia, elevated serum iron levels, erythroid hyperplasia, and a distinctive cell, the "ringed sideroblast"<sup>12</sup>. Large numbers of these cells are found in iron-stained marrow preparations in patients with this type anemia.

Figure 4 shows a typical "sideroblast" with the nucleus ringed by ferritin particles. Normally, iron particles are dispersed throughout the cytoplasm but in sideroblasts they are found between the cristae of the mitochondria. Abstinence leads to the disappearance of "ringed sideroblasts" from the marrow of the alcoholic within 48 to 72 hours<sup>13</sup>.

Sideroblastosis in the alcoholic results from a deficiency of "pyridoxal phosphate." The administration of this co-enzyme causes alcohol-induced sideroblasts to disappear despite continued alcohol consumption<sup>13</sup>.

Daily alcohol ingestion of three weeks impairs the ability of the red cell enzyme, "Pyridoxal kinase," to convert pyridoxine to "pyridoxal phosphate." This is the co-factor required by delta amino levulinic acid synthetase for heme synthesis. (Figure 5.) In its absence, "pyridoxal phosphate" blocks iron absorption, leads to a rise in serum iron levels, impairs red cell incorporation of iron, and results in abnormal deposition of ferritin particles in developing red blood cells.

Alcohol also effects iron absorption. Alcoholics absorb more iron than normal individuals.<sup>14,15</sup> This has been attributed to the associated chronic pancreatitis found in many alcoholics. When pancreatic enzymes are given to such patients, there is a decrease in iron absorption<sup>16,17</sup>. Alcohol also causes increased absorption of ferric chloride<sup>18</sup>. To a certain extent, the skid-row alcoholic who sells his blood may protect himself against alcohol-induced iron overload secondary to increased iron absorption, hemolysis, and impaired iron utilization.

### Skid Row Study

In a metabolic study of 65 skid-row alcoholics, Eichner and his associates confirmed

many of the previously mentioned folate and iron abnormalities caused by alcohol<sup>19</sup>. Thirteen of their 65 patients had megaloblastic marrow changes secondary to pure folate deficiency; seven had a sideroblastic marrow; and 13 had a combination of the two abnormalities. Iron deficiency, hemorrhage, inflammation, and pernicious anemia were other causes of anemia. Thrombocytopenia was present in 12 of the 65 patients.

Subsequently, Eichner and his associated proposed a schema for the evolution of alcoholic anemia.

*Stage I* is the stage of "negative vitamin balance." It begins after several weeks or months of daily alcohol ingestion and decreased food intake. It is characterized by a drop in serum folate levels, the appearance of vacuolated erythroid and myeloid precursors in the bone marrow and a decrease in serum iron levels.

*Stage II*, the stage of "megaloblastic conversion," is manifested by changes from normoblastic to megaloblastic erythropoiesis. Alcohol accelerates this stage in the confirmed alcoholic.

*Stage III*, the "sideroblastic" stage, begins at variable intervals after Stage I. It is absent with iron deficiency and disappears with the administration of 1 mg of pyridoxine daily.

*Stage IV*, the "resolution stage," follows abstinence from alcohol and the ingestion of a good diet or the administration of large doses of folic acid and pyridoxine.

Importantly, almost all alcohol-induced hematologic changes are prevented by an adequate diet. Comparative studies of middle-class versus skid-row alcoholics reveal few hematologic changes in the former despite comparable alcoholic intake.

Alcohol may also cause iron deficiency by inducing gastrointestinal blood loss secondary to hemorrhagic gastritis, esophagitis, etc. Volunteers with atrophic gastritis who drank 200 ml of alcohol daily developed bleeding gastritis rapidly whereas this complication failed to appear in individuals with superficial gastritis or normal gastric mucosa who drank the same amount. This may be why alcoholic-induced hemorrhagic gastritis is more common in older alcoholics.

### Hemolytic Anemia

Hemolytic anemia is another complication. Three distinct hemolytic syndromes are attributed to alcoholism: stomatocytosis, spur cell anemia, and Zieve's syndrome.

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Stomatocytes are red cells whose central pallor is replaced by an unstained slit or mouth-like area. *Hereditary stomatocytic anemia*, a rare disease, is an autosomal condition where 20 to 30 percent of the red cells are stomatocytes. These cells are hyperpermeable to monovalent but not to divalent cations and show increased osmotic and mechanical fragility. Stomatocytosis mimics hereditary spherocytosis but it is only partially corrected by splenectomy.

*Acquired stomatocytosis* occurs in male alcoholics with fatty livers and mild hepatic dysfunction secondary to recent binges<sup>20</sup>. Normally, only four percent of peripheral red cells are stomatocytes but in the acquired condition 20 to 35% are stomatocytes. The shortened life span of these red cells is not due to splenic sequestration, elevated blood lipids, or red cell enzyme abnormalities. In fact, the cause of acquired stomatocytosis is not certain. Abstinence leads to reversal of stomatocytosis while inhibition causes a recurrency.

*Zieve's syndrome* is another reversible hemolytic syndrome. It is characterized by transient hypercholesterolemia, lactescent serum, and acute fatty infiltration of the liver<sup>21</sup>. It occurs in the course of prolonged alcohol ingestion. Often, the serum amylase level is elevated secondary to pancreatitis. Alcohol causes hypertriglyceridemia and parenteral administration of triglycerides can cause hemolysis<sup>22</sup>. Lysolecithin and Lysocephalin levels are elevated in Zieve syndrome and these have been blamed for the hemolysis. Interestingly, serum folate levels may be elevated in this disorder.

*Spur cell anemia* was described in association with alcoholic cirrhosis in 1964 (Figure 6.) In this condition, both patient and donor red cells have a shortened life span. Normal red cells given to a patient with spur cell anemia or incubated in the patient's plasma, develop spurs. These cells contain excess cholesterol and normal red cells incubated with plasma from patients with spur cell anemia quickly absorb excess amounts of <sup>14</sup>C-labelled cholesterol. It appears that free cholesterol is freely interchangeable with red cell membrane cholesterol in spur cell anemia. This results in increased membrane cholesterol and surface area.

It is not known if spur cells can revert to a normal shape. Several groups claim reversibility is possible while others deny it<sup>23</sup>.

Bile salts seem to be related to spur cell formation. Elevated levels of chenodeoxycholic acid have been found in such patients, and

lithocholic acid, a toxic metabolite, or chenodeoxycholic acid causes spur cell formation in experimental animals<sup>24</sup>.

Table 3 lists the causes of hemolysis in chronic liver disease. Note the overlap with some of the entities associated with alcoholism. Hypersplenism induces hemolysis in only 1 of 6 patients with chronic liver disease. Hence, splenectomy rarely relieves the chronic anemia of cirrhosis unless associated portal hypertension had led to red cell sequestration.

Microangiopathic hemolytic anemia rarely occurs. It is seen more often in cirrhotics with hemangioendotheliomas of the liver.

Sometimes autoimmune hemolytic anemia with a positive Coombs test complicated hepatocellular disease, most notably acute viral hepatitis or infectious mononucleosis.

The presence of G-6-PD deficiency can induce severe hemolysis in the alcoholic patient with viral hepatitis. Serum bilirubin levels may rise to 80 mg percent or above in these patients.

Hypophosphatemia, secondary to alcoholism may lead to decreased red cell levels of ATP with resultant rigidity of the red cell membranes leading to hemolysis<sup>25</sup>.

Patients with chronic liver disease also have an extracorporeal factor causing anemia. Cross transfusion studies have shown that normal red cells given to patients with obstructive jaundice have a decreased survival whereas patient red cells survive normally in healthy recipients<sup>26</sup>. Some believe conjugated bilirubin is the factor causing this type hemolysis.

Finally, alcohol has been blamed for Sick Cell Crisis and stress polycythemia.

### Alcohol And Granulocytes

Since 1963, alcoholics have been known to have impaired leucocyte activity, and leucopenia is observed frequently in alcoholics with severe bacterial infections<sup>27</sup>. Volunteers subjected to prolonged ethanol ingestion develop both leucopenia and thrombocytopenia in the absence of infection. Alcoholics also appear to be more susceptible to pneumonia than normal individuals and once contracted their pneumonia is usually severe.

Alcohol has seven major effects on white blood cells:

(1) It is toxic for pulmonary macrophages, which are essential to pulmonary clearance of bacteria and a source of colony-stimulating factor necessary for granulocyte production<sup>29</sup>.

(2) It impairs DNA formation. In concentrations sufficient to cause intoxication, alcohol

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decreases the uptake of tritiated thymidine by white blood cells, indicating an interference with cell growth and production<sup>30</sup>.

(3) It alters immune defense. Alcohol inhibits phytohemagglutinin induced lymphocyte transformation, implying T-cell suppression<sup>30</sup>.

(4) It interferes with the inflammatory response. Both alcohol and aspirin impair granulocyte adherence, thus interfering with the movement of granulocytes out of blood vessels into areas of inflammation<sup>31</sup>. An impaired immune defense may be responsible for the alcoholic's increased susceptibility to certain types of infection and the leucopenia sometimes encountered in alcoholics with pneumococcal pneumonia. Intoxicated animals have decreased bacterial clearance from their lungs<sup>28</sup>.

(5) It alters the response to endotoxin administration, which causes a neutropenic instead of the normal leucocytosis response. The altered response to endotoxin has been attributed to a decrease granulocyte reserve in the alcoholic but this is unlikely for splenectomy corrects the response. An inability to respond to endotoxin may explain the alcoholic's impaired ability to handle gram negative infections.

(6) Alcohol decreases leucocyte mobilization into areas of trauma<sup>32</sup>. This effect is observed in the skin of volunteers 2 to 4 hours after they received 50 to 75 ml for ethanol intravenously.

(7) In blood concentrations of 100 mg/100 ml alcohol impairs leucocyte chemotaxis, in vitro, but it does not interfere with leucocyte phagocytosis or bactericidal activity.

### Alcohol And Platelets

Many drugs, including alcohol, impair the ability of platelets to participate normally in hemostasis. Some selectively inhibit adenosine diphosphate (ADP). Others, such as aspirin, indomethacin, and phenylbutazone, act directly on platelets while aminophylline and caffeine inhibit platelet phosphodiesterase, the enzyme that catalyzes the conversion of cyclic AMP to AMP<sup>33</sup>.

Thrombocytopenia may develop in the wake of acute alcoholism or during acute withdrawal<sup>34</sup>. Cowan and Hinds studied 43 alcoholics admitted to the Cleveland Metropolitan General Hospital with alcohol withdrawal<sup>35</sup>. Their patients had ingested a fifty or more of whiskey daily for at least three months. None had gastrointestinal bleeding or severe liver disease but 36 had platelet counts below 100,000/ml.

No relationship was found between their decreased platelet counts or their hematocrits, serum folate levels, or bone marrow changes. However, 20 of the 36 patients had folate levels below 3 ug/ml and 60% had early megaloblastic marrow changes.

Given a normal diet, these same patients had platelet rises within two to three days with daily increases of 20 to 30,000/ml.

Thrombocytopenia is eight times more common in alcoholics than in other patients. It occurs in one-fourth to one-third of acutely ill alcoholics. Assuming an alcoholic population of over 10 million in the United States, at least 300,000 individuals have alcohol related thrombocytopenia. Alcoholic platelets have a shortened life span and with folate deficiency, thrombopoiesis is often ineffective.

Alcoholics appear to have the potential for increased platelet production but either their marrow production fails or else newly formed platelets are destroyed within the marrow. The presence of large numbers of megathrombocytes in the peripheral blood of alcoholics suggests the latter.

Alcoholic thrombocytopenia is multifactoral and related to folate deficiency, to bone marrow suppression, to decreased platelet survival, and to combination of these factors. In the presence of associated liver disease, platelet aggregation is also impaired.

Alcoholic thrombocytopenia is a potentially lethal hazard for the accident-prone alcoholic. This is particularly so for the alcoholic cirrhotic who may have a deficiency of plasma clotting factors, insufficient platelets, and drug impaired platelet reaction.

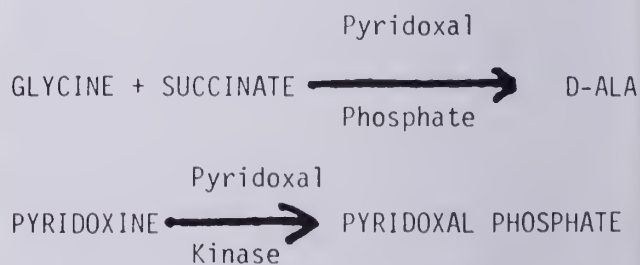
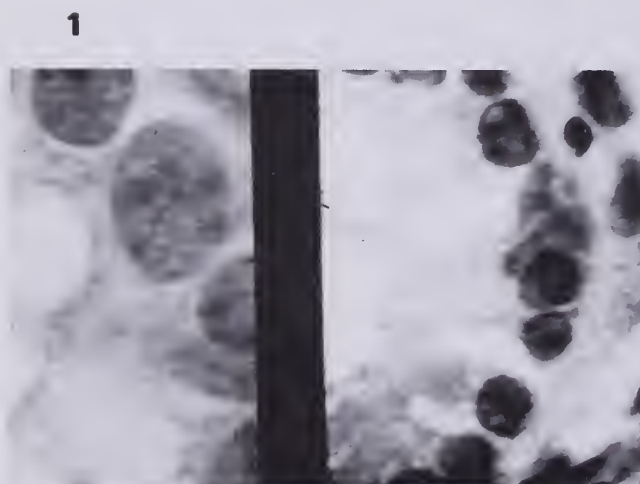
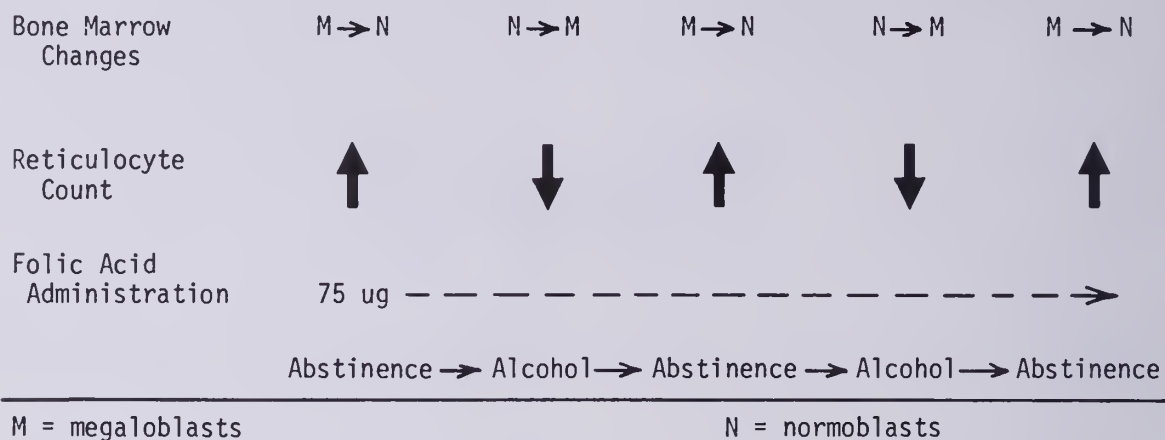
Table 4 outlines the effects of alcohol on platelets.

### Summary

In summary, the hematopoietic effects of alcoholism are multifactorial. Alcohol is a toxin and its hematopoietic effects may be increased by protein calorie malnutrition, folate, pyridoxine, or iron deficiency, or any combination of these deficiencies. These deficiencies in turn may foster not only anemia, but thrombocytopenia, neutropenia, and even pancytopenia in the alcoholic patient.

Fortunately, repletion with folate and/or pyridoxine, a good diet and abstinence are usually sufficient to bring about an early remission of alcohol-induced hematopoietic lesions.

(From: Herbert & Sullivan)





FOOTNOTE TO FIGURE 1—Each time this alcoholic patient was allowed a libral ration of alcohol bone marrow studies showed a revision of normal hematopoiesis to megaloblastic hematopoiesis.

FIGURE 2—The megaloblastic nuclei in jejunal crypt cells of a folate deficient alcoholic are compared with the smaller nuclei seen in normal jejunal crypts.

FIGURE 3—Large vacuoles are present in the cytoplasm of each of the two megaloblasts shown.

FIGURE 6—Numerous spur cells are seen in this patient's blood.

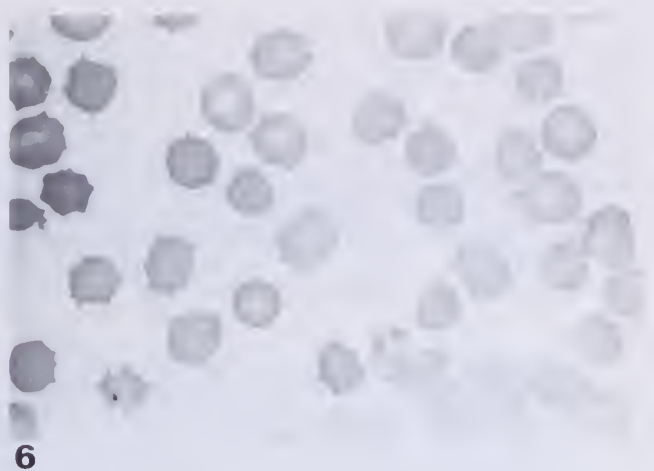


TABLE 2

RELATIONSHIP OF FOLATE DEPLETION AND ALCOHOL

- 1. Folate depletion correlates well with a poor dietary intake in alcoholics.
- 2. It is rare in cirrhotic teetotalers.
- 3. It occurs less often in beer drinkers. (beer contains folic acid)
- 4. It disappears with abstinence and a good diet.
- 5. Hematologic changes occur with depletion of tissue stores; tissue stores are assessed by measurement of red blood cell folate.
- 6. Serum folate levels may fall rapidly due to alcoholic interruption of the folate enterohepatic cycle and may bbe low for weeks or months before tissue depletion; therefore
- 7. Serum folate levels are unreliable in assessing folate deficiency in alcoholics.

TABLE 3

HEMOLYTIC ANEMIAS THAT MAY BE OBSERVED IN ALCOHOLICS WITH LIVER DISEASE

- 1. Stomatocytic anemia
- 2. Zieve's syndrome
- 3. Spur cell anemia
- 4. Microangiopathic hemolytic anemia
- 5. Autoimmune hemolytic anemia (Coombs +)
- 6. G-6-PD deficiency anemia
- 7. ATPase deficient anemia secondary to hypophosphatemia
- 8. Anemia secondary to a plasma factor associated with chronic cirrhosis.
- 9. Lead-induced anemia

TABLE 4

EFFECTS OF ALCOHOL ON PLATELETS

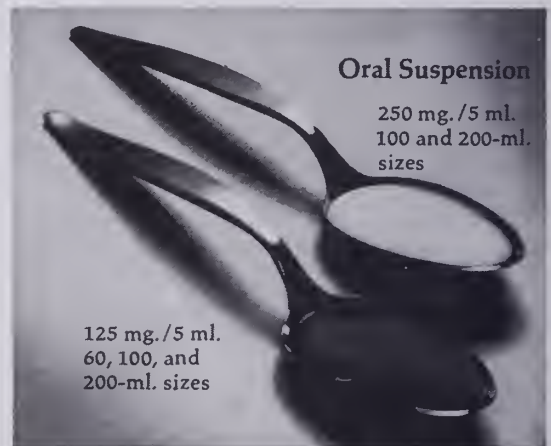
- 1. Inhibits epinephrine and collagen-induced platelet aggregation.
- 2. Impairs secondary aggregation.
- 3. Shortens the platelet life span.
- 4. Decreases the availability of platelet Factor 3.
- 5. Impairs adenosine diphosphate (ADP) release.
- 6. Alters platelet membrane structure.

References

References available upon request.

Request for reprints: Dr. Thomas W. Sheehy, Chief, Medical Service, Veterans Administration Hospital, 700 South 19th Street, Birmingham, Alabama 35233.

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# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**ANESTHESIOLOGY** Age 39, Andhra Medical College India 1963 American Board Eligible, seeking practice in specialty assistant or associate Available immediately LW-090179

...

**EMERGENCY MEDICINE** **INTERNAL MEDICINE** Age 29 University of Athens 1976 National Board Certified, will be American Board Eligible in 1979 seeking practice in emergency room, or industrial Available September 1979 LW-18882

...

**FAMILY PRACTICE** Age 47 University of Alabama, 1957 American Board Certified seeking practice in multi-specialty group, single specialty group, partnership or solo Available immediately LW-18574

...

**FAMILY PRACTICE** University of Mississippi 1978, seeking affiliation with a group practice in a moderate sized community greater than 10-15,000 population Presently a second year family practice resident LW-070279

...

**FAMILY PRACTICE** Age 50, Athens, Greece, 1955 seeking practice in general, industrial, or institutional in proximity to Mobile Montgomery or Birmingham Available 4-6 weeks from date of agreement LW-071079

...

**GENERAL PRACTICE** Age 33, UAB, 1975, seeking general practice near TVA or Gulf Coast vicinity in a town with a population of 2,500-75,000 Available July-August 1980 LW-071179

...

**GENERAL PRACTICE** Age 26, McGill, 1977 National Board Certified, seeking practice in institutionally based multispecialty group or emergency room Available immediately LW-18968

...

**GENERAL PRACTITIONER** Age 37, University of Louisville 1967, American Board Certified, seeking practice in assistant or associate preferably in the Mobile area. Available immediately LW-070379

...

**GENERAL PRACTICE** Age 43, University of Texas, 1968, seeking practice in general, assistant or associate, industrial, institutional, student health or salaried position Available immediately LW-090279

...

**INTERNAL MEDICINE** Age 32, University of Alabama, 1972 American Board Certified in Internal Medicine in 1975, seeking practice in general, specialty partnership or group preferably in a town with a population greater than 20,000 Available October 1979 LW-090379

...

**INTERNAL MEDICINE** Age 28, Guntur Medical College, 1975, will be American Board Eligible in 1980; seeking practice in solo or emergency room Available July 1980 LW-19346

...

**INTERNAL MEDICINE** Age 30, King Edward Medical College, 1972; Board Eligible in Internal Medicine seeking practice in specialty solo or partnership in a town with a population greater than 10,000 Available January 1980 LW-071279

...

**INTERNAL MEDICINE/GASTROENTEROLOGY** Age 30, Baylor 1975, American Board Certified in Internal Medicine, seeking practice in specialty, assistant or associate in a town greater than 100,000 population Available August 1980 LW-080179

**INTERNAL MEDICINE RHEUMATOLOGY** Age 30 University of Alabama 1974 National Board Certified, American Board Certified seeking practice in multispecialty group single specialty group or institutionally based Available immediately LW-18268

...

**INTERNAL MEDICINE** Age 31 Baylor College of Medicine 1973, American Board Certified, seeking practice in single specialty group multi-specialty group industrial solo, partnership or school health Available February 1981 LW 16401

...

**NEPHROLOGY** Age 30 University of North Carolina 1975 National Board Certified American Board Certified, will be American Board Eligible in 1980, seeking practice in single specialty group, multi-specialty group or partnership Available July 1980 LW-19316

...

**OBSTETRICS AND GYNECOLOGY** Age 38 Stanley Medical College 1963, American Board Certified Available immediately LW-070679

...

**OCCUPATIONAL MEDICINE FAMILY PRACTICE** Age 30, Montreal University 1974, seeking practice in industrial, partnership or solo Available September 1979 LW-17380

**OPHTHALMOLOGY** Age 32, Kansas, 1974 American Board Eligible in 1980 seeking practice in partnership, single specialty group or multi-specialty group Available July 1980 LW-16895

...

**PATHOLOGY** Age 50 Medical College of Virginia, 1956, American Board Eligible seeking practice in single specialty group institutionally based or research Available October 1979 LW-17027

...

**RADIOLOGY** Age 32, University of Alabama, 1973, American Board Certified, seeking practice in single specialty group, partnership or institutionally based Available July 1980 LW-17661

...

**SURGERY GENERAL** Age 31 University of Alabama, 1974 American Board Eligible, 1980, seeking practice in single specialty group, partnership or solo Available August 1980 LW-18156

...

**SURGERY GENERAL** Age 30, University of Alabama, 1974 seeking a surgical partnership or group practice however will also consider exceptional opportunities in solo practice Available July 1980 LW-070779

## PHYSICIANS WANTED (Opportunities for Practice)

### OPPORTUNITIES FOR GENERAL PRACTITIONERS

Town of 1,000 population, less than 10,000 trade area in Central Alabama nearest large city 40 miles - population of 200,000; nearest hospital 20 miles, last physician in town died 12 years ago, equipped three room clinic available with guaranteed salary or option to purchase, principal sources of income in community are manufacturing, forestry products, and farming, 4 churches, 1 school, recreational activities include three area lakes, boating, fishing and hunting PW-09178

...

Town of 1,000 population, trade area 20,000 in Southeast Alabama, nearest large city 165,000 population 35 miles, Principal sources of income in community are farming and lumber industries, 2 churches, 2 schools, social activities include service clubs and country club Presently all medical services at the family practice clinic area provided by residents of the family practice residency training program on a rotation basis The clinic is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps PW-02179

...

Town of 2,500 population, trade area 50,000, North Alabama, one semi-retired physician in town, one physician died recently, 2 hospitals in town, nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed, principal sources of income in community are agriculture and light industry, 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course PW-09378

**PRIMARY CARE PHYSICIAN** - Wanted to serve as Medical Director of a Primary Care Group Practice Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice Moving expenses, salary, other fringe benefits PW-030179

...

**INTERNIST** - Excellent opportunity for association with a multi-specialty clinic in southeast Alabama Excellent fringe benefits from our professional corporation Quality schools and churches in the city with good recreational opportunities PW-09478

...

**FAMILY PHYSICIAN** - Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches Associations with established family physician possessing well-equipped offices available Invitation to visit with expenses paid will be directed to those who qualify PW-26

...

**GENERAL PRACTICE & OB** - Opportunity for a general practitioner who will deliver babies 67 bed hospital is accredited, now has 150 deliveries per year Town is located in northwestern section of the state, population 5,000 plus 10,000 trade area Nice, modern office space available PW-066179

...

# Auxiliary



Mrs. Eugene H. Bradley  
President, A-MASA

## Shape Up For Life

The AMA Auxiliary's new nationwide campaign, "Shape Up for Life" is aimed at keeping Americans healthy by making them aware that proper diet and exercise are vital to good health and fitness. It's based on the premise that it's never too soon or too late to begin exercising regularly and eating right.

The idea for the campaign springs from the organization's long-time interest in making people aware of what they can do to help keep themselves healthy. And it is the auxiliary's contribution to the health care industry's Voluntary Effort for cost containment. This campaign will be directed by the national Health Projects Committee, Mrs. George Scofield, (Pat), of Birmingham, Chairman.

A special campaign logo has been designed which symbolizes the good feeling which comes from optimum healthy living.

The campaign is not a one-year effort. The focus for 1979-1980 is food for fitness; and in July 1980, a second phase will be introduced to focus on physical fitness.

We will be putting posters and pamphlets in your office, hospitals, churches and other public buildings.

This fall radio and television public service announcements, prepared for AMA, will carry the "Shape Up for Life" message into millions of homes.

We Alabamians are beginning our year with a special workshop on this campaign. We will be meeting at the MASA building in Montgomery for our Fall Board Meeting and Workshop. Pat Scofield has agreed to conduct the workshop. How lucky we in Alabama Auxiliary are to have a National President and Committee Chairman from Alabama. No other state can say that this year!

Our meeting is Sept. 25 and 26th. This meeting is always well attended. I think it helps give us a good start with bright new ideas to add to our present programs.

As State Officers and Chairman, it gives us a good opportunity to meet any new county presidents or members that we may not have had the chance to know before. It makes it much easier during the year to correspond with someone whose face you have seen. I think we tend to get better results and correspondence from one we have met, face to face.

This is also a time for the members all over the state to get to see what a nice place the MASA Building is and also to meet the nice people who work there everyday. As State officers, most of us know all of these nice things about MASA but every year we have new faces who volunteer for auxiliary work but have never needed to go to the MASA Office.

On the Tuesday Night schedule is a dinner with a former MASA employee as the speaker. Bob Ingram, of Montgomery, is now owner of the "ALABAMA" magazine and just incidentally grew up as my next door neighbor in Centre.

So you can see why I am excited about this campaign, board meeting, workshop, dinner speaker and this article.

Thank you for taking your time to read this Auxiliary Page.

A handwritten signature in cursive script, appearing to read "Gaxie".

Pres.-Elect Mrs. O.B. Carr, Jr.; First Vice-Pres. Mrs. Rufus Lee; District Vice-Pres. NW Ralph Braund; NE Mrs. Andrew Brown; SW Mrs. Clifford Pringle, Jr.; SE Mrs. William Lazenby; Rec. Sec. Mrs. Wallace Frierson; Treas. Mrs. Robert Estock.



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Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

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- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications and Usage:** For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

**Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.**

The recommended quantitative disc susceptibility method (Federal Register, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

**Warnings:** Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

**Urinary Tract Infections:** Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

**Supplied:** Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has no significant effect on other normal, necessary intestinal flora.

## Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.



# JOURNAL

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OCTOBER 1979

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THE  
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AMA Auxiliary President  
Mrs. Ben Johnson and family of Bessemer.

Her address, page 28.

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## LIBRIUM® chlordiazepoxide HCl/Roche THE ANXIETY-SPECIFIC

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malforma-

tions as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



Roche Products Inc.  
Manati, Puerto Rico 00701



# JOURNAL

of the Medical Association of the State of Alabama

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## ABOUT THE COVER

*The new President of the AMA Auxiliary, Mrs. Ben H. Johnson, Jr., Bessemer, is pictured (center right) with her family at the occasion of her installation at the July meeting of the AMA. Left to right, Ben H. Johnson III and Karen, Atlanta; Chip and Nancy Johnson Haring, M.D., Atlanta; Ben H. Johnson, Jr., M.D.; Mrs. Johnson; Kerry Johnson, daughter of Susan and John Johnson, Houston. Mrs. Johnson's inaugural address may be found on page 28.*

## Information For Authors Concerning Manuscripts

Manuscripts should be typewritten, double spaced on white paper 8½x11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

**Style:** The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

*The Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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**Illustrations:** Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct, drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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## From the Executive Director

### VE Is Working

At this writing, the tumult and shouting over the Carter Administration's hospital cost containment proposal, which would introduce the radical concept of utility-type regulation to the health care industry, was continuing.

Advocates of such a drastic intrusion into the medical marketplace choose to ignore what the profession has accomplished in significantly checking the rise in health care costs.

The Voluntary Effort (VE) to contain health care costs was launched in November 1977 as the American health industry's answer to the problem of containing health care costs while maintaining a high quality of care.

A broad-based coalition of organizations joined forces to sponsor the VE—and achieve voluntary initiatives against costs in the various components of health services.

The organizations are:

- American Hospital Association
- American Medical Association
- Blue Cross and Blue Shield Associations
- The Business Community
- Federation of American Hospitals
- Health Industry Manufacturers Association
- Health Insurance Association of America
- Virginia Knauer and Associates (consumer research)
- National Association of Counties

The VE is guided by a National Steering Committee and is implemented by cost containment committees in each of the 50 states.

The Voluntary Effort to contain health care brings together physicians, hospital administrators, health care manufacturers, health insurance companies, labor, industry and consumers to work towards a voluntary slowdown in the rapid growth of health care costs.

A voluntary program of this nature stands a greater chance for success than does one prescribed by federal legislation.

The goals of the Voluntary Effort through 1979 and on into 1980 give a clear picture of what the VE set out to do, how it is being achieved and what is being planned for the future. The VE plans to:

- Narrow the Gap Between Total GNP and Total Hospital Expenditure Growth Rates
- Limit Hospital Capital Investment
- Improve Productivity
- Tighten Hospital Utilization Review
- Encourage Supplier Price Restraint
- Modify Insurance Benefits
- Encourage Restraint of Physicians' Fees
- Improve Health Care Delivery System
- Achieve the Goals Set for 1980.

We know it will work, because it is already working.

S. Lon Conner





Luther L. Hill, M.D.  
President

### Should Practice Management Workshops Continue?

A great deal of the credit for the success of a physician can be attributed to the help he or she gets from office personnel.

It is with this in mind that MASA, through its Department of Education and with the help of the American Medical Association's Department of Practice Management, has sponsored workshops around the state. Hundreds of medical office personnel have attended these inexpensive programs packed with useful information on telephone management, collections, appointment scheduling and office supervision.

The one-half or full-day programs have been presented in Birmingham, Cullman, Florence, Gadsden, Mobile, Montgomery, Selma, Anniston, Dothan, Huntsville, and Tuscaloosa so they would be within the reach of all of the physician offices.

Initially, these programs played to a "full house." Recently, however, the attendance has declined and on several occasions the meetings had to be cancelled because of lack of advanced registration.

Of course, there is still plenty to teach and the programs that have been presented have been well conceived and well delivered primarily by our Director of Education, George Oetting, Ed.D. However, it takes a tremendous amount of time and effort to present these programs. Each offering necessitates printing and double mailing of publicity brochures, hundreds of phone calls, articles in *The Alabama M.D.*, and many hours of staff time for the education and legal departments. Speakers from the AMA fly in for the meetings.

It is reasonable to conclude, however, that they should not continue unless we can get adequate support from the physicians and a better attendance of office personnel at the meetings.

If you would like for the programs to continue, let Dr. Oetting know what subjects would be the most valuable to you and be sure to encourage your staff to attend. Announcements of these meetings are made in *The Alabama MD* at frequent intervals.

*Luther Hill*

**MEDICAL ASSOCIATION OF THE STATE OF ALABAMA  
PRACTICE MANAGEMENT EDUCATIONAL ACTIVITIES  
FOR MEDICAL OFFICE PERSONNEL 1977-79**

**1977**

- |   |   |                         |
|---|---|-------------------------|
| 1 | Montgomery, May 24, 1977  | A.M. Session—(60)       |
|   | "You, The Telephone Manager"  | P.M. Session—(60)       |
| 2 | Dothan, May 25, 1977  | A.M. Session—(67)       |
|   | "You, The Telephone Manager"  | P.M. Session—(52)       |
| 3 | Mobile, May 26-27, 1977 (Presented by Medical Society of Mobile County)     |                         |
|   | "You, The Telephone Manager"  | Two—A.M. Sessions—(48)  |
|   | "Medical Collections Management"  | Two—P.M. Sessions—(30)  |
| 4 | Birmingham, June 9-10, 1977 (Presented by Jefferson County Medical Society) |                         |
|   | "You, The Telephone Manager"  | Two—A.M. Sessions—(120) |
|   | "Medical Collections Management"  | Two—P.M. Sessions—(120) |
| 5 | Huntsville, November 2-3, 1977  |                         |
|   | "You, The Telephone Manager"  | Two—A.M. Sessions—(18)  |
|   | "Medical Collections Management"  | Two—P.M. Sessions—(22)  |
| 6 | Gadsden, November 4, 1977   |                         |
|   | "You, The Telephone Manager"  | A.M. Session—(19)       |
|   | "Medical Collections Management"  | P.M. Session—(17)       |
| 7 | Florence, December 1, 1977  |                         |
|   | "You, The Telephone Manager"  | A.M. Session—(45)       |
|   | "Medical Collections Management"  | P.M. Session—(40)       |
| 8 | Tuscaloosa, December 2, 1977  |                         |
|   | "You, The Telephone Manager"  | A.M. Session—(20)       |
|   | "Medical Collections Management"  | P.M. Session—(24)       |
| 9 | Fairfield, December 3, 1977   |                         |
|   | "You, The Telephone Manager"  | A.M. Session—(30)       |

**1978**

- |    |   |                    |
|----|---|--------------------|
| 10 | Birmingham, May 10-11, 1978 (Presented by Jefferson County Medical Society) |                    |
|    | "Medical Collections Management"  | Two Sessions—(104) |
|    | "Appointment Scheduling"  | Two Sessions—(43)  |
| 11 | Birmingham, May 23, 1978  |                    |
|    | "The Medical Office Manager"  | Workshop—(35)      |
| 12 | Florence, June 28, 1978   |                    |
|    | "Appointment Scheduling"  | A.M. Session—(18)  |
|    | "You, The Telephone Manager"  | P.M. Session—(16)  |
| 13 | Decatur, June 29, 1978  |                    |
|    | "Appointment Scheduling"  | A.M. Session—(23)  |
|    | "You, The Telephone Manager"  | P.M. Session—(20)  |
| 14 | Montgomery, July 26, 1978   |                    |
|    | "Appointment Scheduling"  | A.M. Session—(29)  |
|    | "You, The Telephone Manager"  | P.M. Session—(34)  |
| 15 | Opelika, July 27, 1978 (Cancelled—insufficient registration)                |                    |
| 16 | Gadsden, September 13, 1978 (Cancelled—insufficient registration)           |                    |
| 17 | Anniston, September 14, 1978  |                    |
|    | "Appointment Scheduling"  | A.M. Session—(26)  |
|    | "You, The Telephone Manager"  | P.M. Session—(25)  |
| 18 | Mobile, October 10-12, 1978 (Presented by Medical Society of Mobile County) |                    |
|    | "Appointment Scheduling"  | Two Sessions—(22)  |
|    | "You, The Telephone Manager"  | One Session—(33)   |
|    | "Medical Collections Management"  | One Session—(33)   |
|    | "The Medical Office Manager"  | One Session—(21)   |

**1979**

- |    |   |                   |
|----|---|-------------------|
| 19 | Birmingham, March 6, 1979               |                   |
|    | "The Medical Office Supervisor"         | Workshop—(16)     |
| 20 | Tuscaloosa, March 6, 1979               |                   |
|    | "Appointment Scheduling"                | A.M. Session—(15) |
|    | "Medical Collections Management"        | P.M. Session—(26) |
| 21 | Montgomery, May 8, 1979                 |                   |
|    | "The Medical Office Supervisor"         | Workshop—(33)     |
| 22 | Dothan, May 9, 1979                     |                   |
|    | "Appointment Scheduling"                | A.M. Session—(22) |
|    | "Medical Collections Management"        | P.M. Session—(24) |
| 23 | Selma, May 10, 1979                     |                   |
|    | "Appointment Scheduling"                | A.M. Session—(13) |
|    | "Medical Collections Management"        | P.M. Session—(18) |
| 24 | Huntsville, October 10, 1979            |                   |
|    | "The Medical Office Supervisor"         |                   |
| 25 | Cullman, October 11, 1979               |                   |
|    | "Appointment Scheduling" (A.M.)         |                   |
|    | "Medical Collections Management" (P.M.) |                   |

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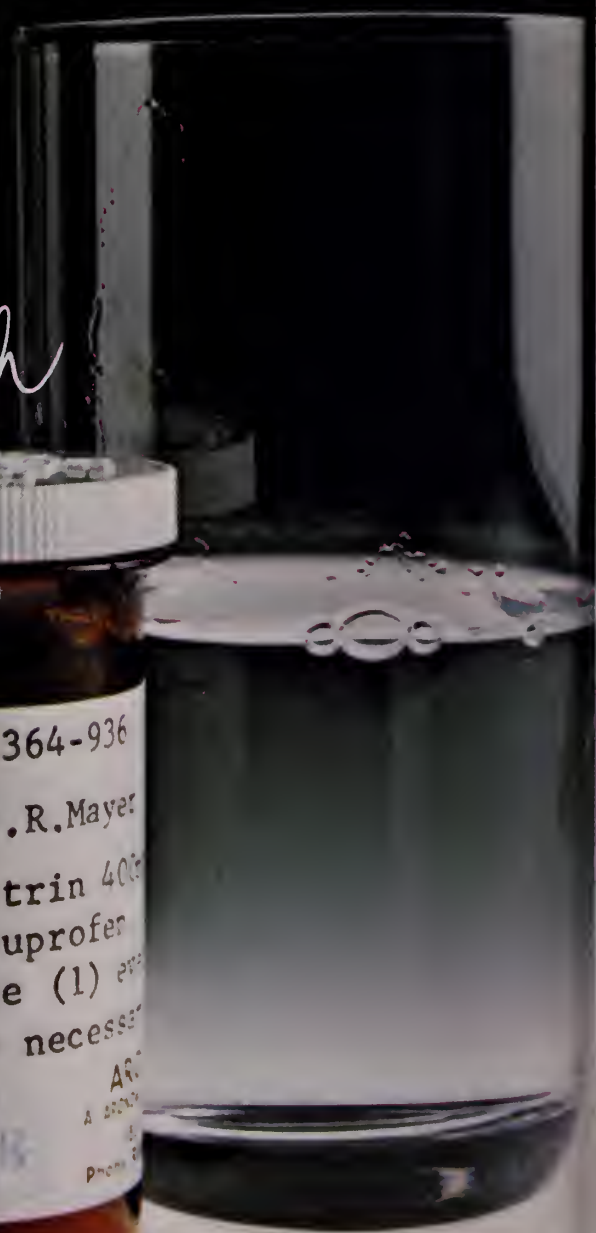
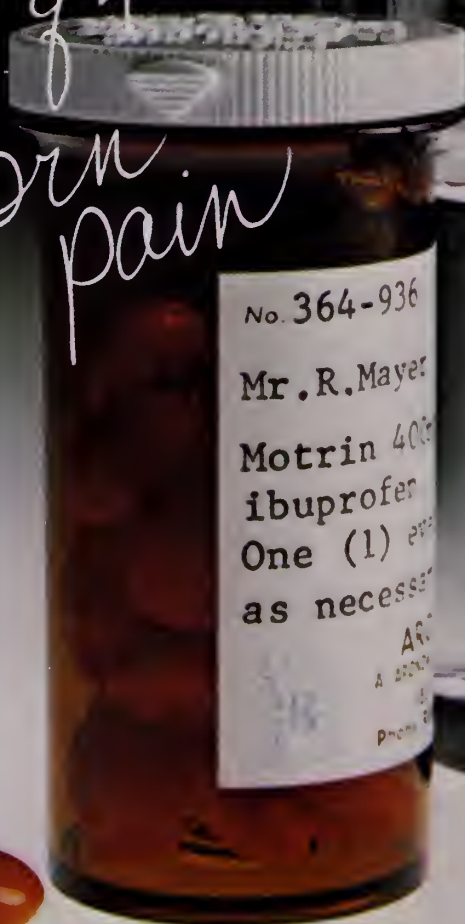
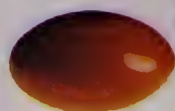
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a new  
indication for  
Motrin<sup>®</sup>  
(ibuprofen)



A well-tolerated, nonnarcotic prescription for pain

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400 mg

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# Motrin now proved an effective analgesic for mild to moderate pain

Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

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\*0 = No relief    1 = Partial relief    2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

**Motrin** 400<sup>TABLETS</sup>mg  
ibuprofen, Upjohn

- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

**Upjohn**

**Motrin<sup>®</sup>** (ibuprofen)

## now proved an effective analgesic for mild to moderate pain

**Motrin<sup>®</sup> Tablets** (ibuprofen, Upjohn)

**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin: used concomitantly may decrease Motrin blood levels.

Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

### Adverse Reactions

#### Incidence greater than 1%

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,\* epigastric pain,\* heartburn,\* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,\* headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

\*Incidence 3% to 9%.

#### Incidence less than 1 in 100

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

#### Causal relationship unknown

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

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& DOHME  
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# Rural Preceptorship Program

Colin Campbell, M.D.  
Dean

School of Primary Medical Care  
The University of Alabama in Huntsville

In mid-November the newspapers of some eight towns in North Alabama will carry a photo of a medical student and a brief story something like the following:

Johnny R., a medical student from the School of Primary Medical Care at the University of Alabama in Huntsville, will join Dr. Hippocrates on Nov. 26 for a four-week training period.

Under Dr. Hippocrates's supervision, Johnny R. will see patients at the office and hospital.

This is part of a course requirement in Community Medicine which emphasizes the broad responsibility of the physician to the community in which he functions.

Mr. R. will then return to Huntsville to complete the final months of his curriculum prior to receiving his M.D. degree.

This story will be repeated in February with different names, faces, and locations. By the time the current seniors at the UAH School of Primary Medical Care receive their M.D. degrees from the University of Alabama School of Medicine in June, a good many people across North Alabama will have had evidence in the person of one or more medical students that the medical education program in the North Alabama region is alive and well; and 17 hard-working physicians will have provided an equal number of medical students with what one of their predecessors has called "*the most enjoyable and beneficial four weeks of my medical school curriculum.*"

The Community Medicine Rural Preceptorship Program of the UAH School of Primary Medical Care enters its fourth operational year this fall. So far 28 doctors have worked with the 48 medical students who have completed the program. These doctors have given a total of 9,934 physician-hours (a conservative tally), all on a volunteer basis. For the students, the four weeks with a primary care physician is near-total immersion in the vocation of a practicing small-town doctor. The student not only works side-by-side with his or her preceptor wherever patients are seen, but also shares to a considerable extent in the life of the community. Preceptors take students with them to church and to local industrial plants, to Rotary or Lions Club, to football games and house-warmings, and to meetings of the county medical societies and the area branches of the Alabama Chapter of the American Academy of Family Physicians. For example, "I try to give them," says Dr. Robert Rhyne, a family doctor in Moulton, "a sense of responsibility and a sense of opportunity."

## Belongs In The Curriculum

A concentrated block-time experience in a rural or semi-rural primary care office practice is a logical component of the medical student curriculum in a school that was established largely because of the shortage of primary care physicians in rural areas throughout the state. A three-year special project grant from HEW awarded in July of 1975 and renewed in 1978 made the SPMC Community Medicine Rural Preceptorship Program possible.

During the 1975-76 academic year, under the leadership of F. Marian Bishop, Ph.D., our Chairman for Community Medicine Programs, the Rural Preceptorship Program's educational objectives, methods, and procedures were determined in final

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form and a pool of suitable communities and prospective preceptors was identified. Considerable enthusiasm was apparent among physicians, hospital administrators, and community leaders even in this developmental stage of the program. This encouraging attitude was exemplified by Dr. Eston Norwood of Athens who told Dr. Bishop, "I'm going to help you out. We're going to make this a success."

Eagerness to teach and to cooperate in the program is as essential a criterion for selecting preceptors as having hospital privileges. Preceptors usually are family physicians (a few are in other specialties). Specialists may serve as preceptors if they devote at least half their practice to primary care.

All preceptors to date have been board-certified. Since the School's Community Medicine curriculum emphasizes the interaction of the physician with the community, it is crucial that the preceptor serve as a role model in this regard, as well as in the quality and focus (primary care) of his practice.

A few statements from one of the Community Medicine faculty about Dr. Ralph Underwood, a family doctor in Russellville for 33 years, indicates the kind of commitment that the school wants the students to observe at close hand:

" . . . He has taken (the student) with him for an appearance as witness in a court case, . . . to church, where he teaches Sunday school . . . He . . . is on the Board of Health, the Chamber of Commerce, Civitan . . . and exerts influence on community matters through these informal channels, as well as more formal ones (Board of Health).

"He is concerned about health matters touching the community, such as the level of immunization in school-age children, the state of septic tanks in the area, etc., and tries to affect the outcome of decisions regarding these matters.

"He is alert to psychosocial problems of his patients . . . and is coaching [the student] on the management of these patients. He does as much personal counselling as time permits, and refers others to [specific] local human service agencies. . . ."

The physician-preceptors and the SPMC Community Medicine faculty share supervision of the SPMC senior medical students during their five-week Community Medicine rotation. Before going to their preceptorship sites, the students participate in an introductory teaching week at the School of Primary Medical Care, attending lectures and conferences and discussing case studies relating to the scope and content of community medicine. Faculty and guest lectures present such

subjects as health care delivery systems, interactions between governmental agencies and the private practitioner, social and behavioral considerations, public and community resources, and methods to assure high quality care, with an emphasis on preventive health measures. Both the clinical and community medicine aspects of the preceptorship curriculum are summarized in Dr. Richard Later's evaluation of his four weeks in Dr. Earl Rogers's pediatric practice in Decatur:

"Excellent experience! I learned a lot of practical pediatrics and was definitely able to improve on my physical diagnoses. Also I had an opportunity to learn how the various state agencies work in conjunction with the private practitioners, especially the HSA's, Health Department, and services for handicapped children."

"The students have been well-supervised in their clinical training," according to Dr. Underwood in Russellville. The preceptors at the School of Primary Medical Care spend Tuesday afternoon every week during the junior year working with their family practice advisors, who are family physicians in Huntsville. This longitudinal practice experience is quite different from the day-in, day-out continuous exposure in their community medicine preceptors' offices in their senior year.

Both students and preceptors frequently remark that through working in their preceptors' practices, the students gain confidence for the first time that they can put it all together—that they truly can function as practicing physicians. Dr. Underwood observes that "they're anxious to see 'How much do I know?' and are surprised to find that they can manage patient care well."

Dr. Paul Christian hopes that the students who work with him in his practice as a family doctor in Arab, "get some concept of rural practice without medicine's modern conveniences. You have to think more when you don't have equipment like ultra-sound at hand."

Dr. Charles Merryman, who practices family medicine in New Market, feels that the preceptorship is "very beneficial to students going into family practice or any other specialty. I think that all doctors should have a couple of years of general medicine; if they go on to specialize, they'll function more effectively as consultants with some first-hand knowledge of primary care practice."

## Different Needs

Though aspects of the preceptorship may receive slightly different educational emphasis from one preceptor to another and from one student to the next in the same preceptor's office, depending on the students' interests and needs.

Comments from the participating physicians indicate that they share some basic ideas on what they hope the students will gain from the experience.

Dr. Preston Brogdon is a family physician in Hartselle who has also been a full-time faculty member in a university family practice program. He observes that "in medical school, you get the idea that patient care consists of using the best scientific medicine, telling the patients what to do, and they obey and get well." He hopes that his preceptees learn "that you have to arbitrate with your patients. Medical practice isn't just telling patients what to do; you have to educate them to cooperate, to encourage them to participate in their illness and treatment. . . . We're not primarily teaching scientific medicine in the preceptorship. The students have had some clinical experience, so they don't come in cold."

Dr. Charles Hood, who practices internal medicine in Scottsboro, feels that the primary care physician is involved in two aspects of community medicine: community service, through observing local health care needs and actively responding in ways extending beyond office practice; and understanding of working conditions and other local situations that may affect his patient's health.

Dr. Mary Alice Ness commented on her preceptorship:

"Dr. Hood made a special effort to enable me to see other aspects of community medicine besides his office practice. This was worthwhile and greatly appreciated. I especially profited from tours of the Revere plant and the TVA nuclear plant . . . good exposure to industrial medicine."

Another student, Dr. Marcia Chesebro, working with Dr. Joe Hall, a family physician in Stevenson, became curious about the textile manufacturing jargon his patients used. Dr. Hall arranged for Dr. Chesebro to tour the Avondale Mills plant in the area (photo). Her Community Health Study on the mill indicated that she had gained a better understanding of the environment of the textile worker.

A sampling of community health studies prepared in the three years the Community Medicine Rural Preceptorship Program has been operational shows the range of the students' interests in community health: "A Comparison of Rural and Urban Patients and Their Knowledge of Three Areas of Medicine", "Establishment of a Diabetic Education Class in Guntersville", "Patient Education Survey Concerning Prescription Drugs in Hartselle", "Patterns of Evaluation and Follow-up for Children with Hearing Impairment", "Nursing Home Facilities in Morgan County", "Immunizations in Franklin County."

Several of the studies prepared during the last academic year have unusual features. Five SPMC

seniors combined their surveys of emergency room utilization in five different community hospitals into one report, a paper suitable for publication. Dr. Hugh DePaolo prepared his report on the results of lectures and quizzes he presented to students in Arab High School on "Perinatal Nutrition" and "Nutrition During First Two Years of Life".

Dr. Patricia Frierson established the first high blood pressure detection center program for Jackson and Marshall Counties during her four weeks in Scottsboro. During his preceptorship with Dr. Kermit Pitt, a pediatrician in Decatur, Dr. Jim Ryan compiled the first comprehensive listing of Medical and Related Services for Children and Adolescents in that community; the SPMC Community Medicine Faculty plans to make his survey available to physicians and others in Decatur who are involved with children's health.

Dr. Ryan commented that "Dr. Pitt helped me to understand clinical, business, and economic as well as community-related aspects of a solo pediatric practice." Many of the students note with gratitude their preceptors' efforts to teach them something about running a practice.

Dr. Harry Kuberg stated that, after working with Dr. Jack Blackwell in Centre, "I understand better the needs of setting up the practice to suit your own lifestyle and the importance of a good staff."

The students often comment that their preceptorship strengthened their intention to go into family practice or another primary care specialty in a rural area. Dr. Marcia Chesebro wrote, "After my preceptorship in Stevenson with Dr. Joe Hall, I feel much more confident with the prospect of living in a smaller community."

## The Key

This fall Dr. Marian Bishop and other School of Primary Medical Care faculty and staff will be visiting county medical societies, hospitals, and doctors' offices across North Alabama to assess the Community Medicine Rural Preceptorship Program and to re-affirm existing working relationships and establish new ones.

In acknowledging the hard work of all those involved, the preceptors and their office staffs, Dr. Bishop and other SPMC faculty, hospital and health agency administrators, plant managers and civic leaders in the northern Alabama region, the patients must not be overlooked. Their warm acceptance of and interest in the "young doctors" is a key element in the preceptorship experience.

The invitation that Dr. Rhyne notices his patients invariably extend to the students reminds us why the program exists. "We hope," the patients tell the students, "that you'll come back and help out."





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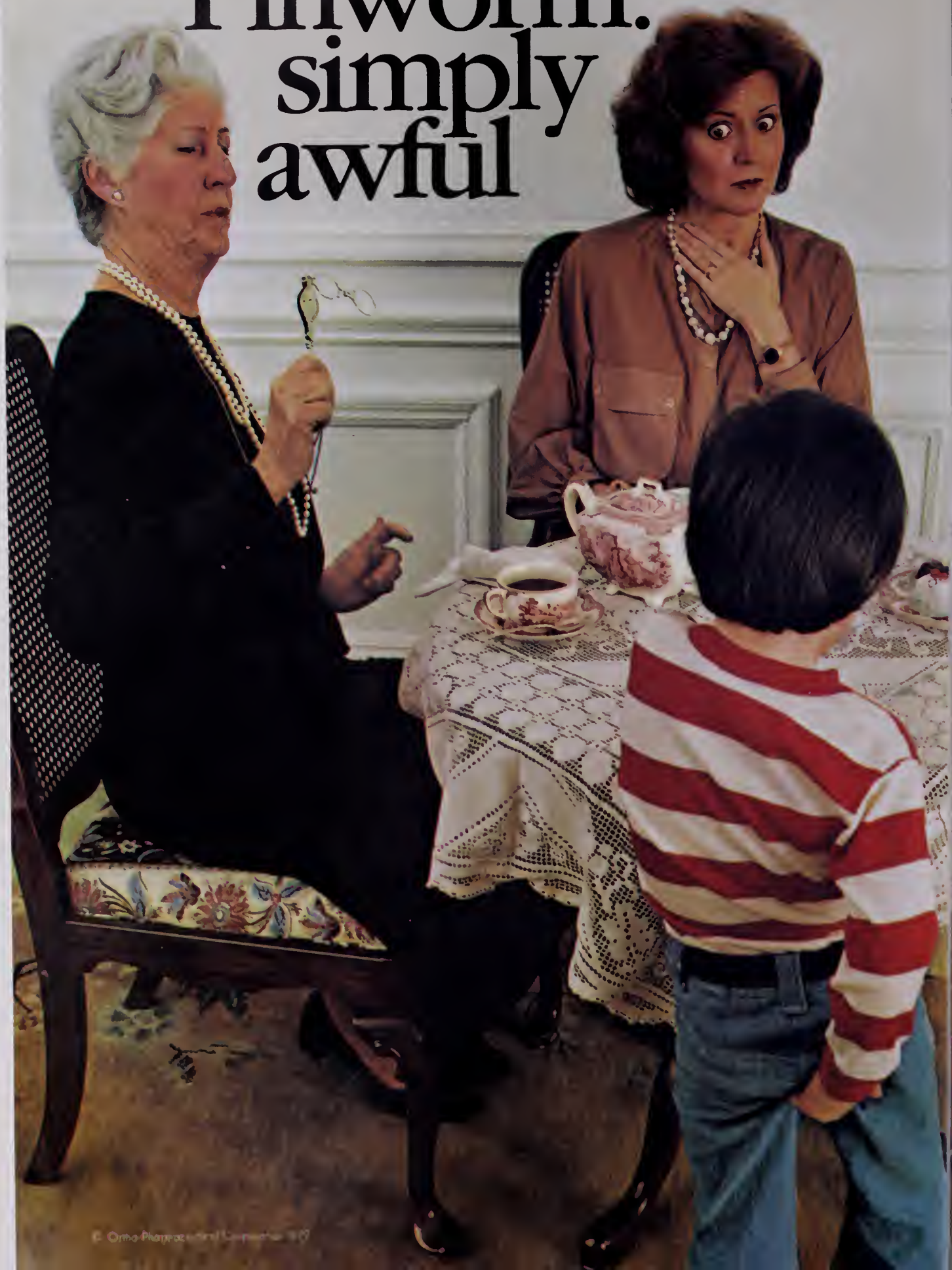
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**Indications** VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies in function of such factors as pre-existing

diarrhea and gastrointestinal transit time, degree of infection and helminth strains.

**Contraindications** VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

**Precautions** **PREGNANCY:** VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

**PEDIATRIC USE:** The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

**Adverse reactions** Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

**Dosage and administration** The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food.

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VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium, and co-developed by Ortho Pharmaceutical Corporation.



# Effect of the Feingold Kaiser Permanente Diet in Minimal Brain Dysfunction

*W. Foster Eich, M.D.*

*Ellen B. Thim, R.N., P.N.P.*

*James E. Crowder, Ph.D.*

## Summary

The authors conducted a controlled, blind study of the Feingold Kaiser-Permanente diet in children who had been diagnosed as having minimal brain dysfunction. An attempt at double-blinding was made. Nine of the 10 children were being treated with stimulants. Children were treated for one month each with a placebo diet or the K-P diet. Effectiveness of the diet treatment was evaluated by reports from the mothers, reports from the teachers, and by objective psychological testing. Statistically significant improvement in behavior was apparent on the mothers' reports; teacher reports and testing did not find significant improvement. These results are contradictory but do raise the possibility that some children may benefit from the K-P diet. Further studies are needed. One definite conclusion can be drawn from this study; studies which are not controlled and which are not done blind (so far as possible), are worthless in evaluating the effectiveness of diet therapy.

Dr. Benjamin Feingold has made the suggestion that some of the symptoms of minimum brain dysfunction may be produced or aggravated by food additives and by naturally occurring salicylates in foods<sup>1</sup>. Connors subjected this hypothesis to a controlled, double-blind study and found statistically significant benefit from the Kaiser-Permanente diet<sup>2</sup>. Brenner also found the diet to benefit 60% of the children with MBD who tolerated it, but that study was uncontrolled and not based on objective criteria<sup>3</sup>.

We decided to attempt a controlled, double-blind study of the Feingold hypothesis, using objective criteria for evaluation. This paper will present our methods, results, and conclusions.

## Patients And Methods

Two of the authors (WFE and EBT) are employed by a private pediatric clinic as a pediatrician and nurse practitioner respectively. There were a number of children in this practice who had been diagnosed as having MBD. After reviewing records, about 30 patients were identified who were suitable for inclusion in the study. Selection was based on a clear-cut diagnosis of MBD, made by the pediatrician, and in almost all cases confirmed by a clinical psychologist. We excluded a few other children from consideration because of insufficient confidence in the parents' ability and willingness to cooperate. We sent letters to the parents of all 30 children explaining the study and inviting them to make an appointment to discuss participation.

At the first visit we explained the plan for the proposed study, allowed the parent to ask questions, and obtained informed consent from the parent and assent from the child.

Each child was in the study for three periods of one month each. The first month was a "baseline" period, during which no changes were made in the child's regimen of treatment. During the second one month period, we placed the child on either the placebo diet or the Kaiser Permanente (K-P) diet. During the third month the child was placed on the other diet. Thus each child was observed on both diet. Order of assignment to diets was determined by a random-number table. We used the diet lists used by Connors, except that we added a "positive" list of suggested foods to help with meal planning.

It would have been technically more correct to have discontinued drug treatment before the study. We did not feel justified, however, in depriving the child of a relatively well-established mode of treatment in order to study a purely hypothetical one. Accordingly, all patients were maintained on



their present dose of medicine throughout the study. Of the 10 who completed the study, nine were on methylphenidate (Ritalin, average dose 16 mg. per day, range 10-25 mg). One was on no medication. (The one who was not on Ritalin was, interestingly, judged a non-responder.)

### Weekly Report Required

During each period, we obtained a weekly report from the parents, using the Conner's Hyperactivity Index, Parent Questionnaire. Parents were also encouraged to include any observations regarding the child's behavior that might be of interest. While the child was on a diet, we also asked for a "compliance report."

We asked for a weekly report from the child's teacher. For this we used Conner's Hyperactivity Index, Teacher's Questionnaire. In addition, we asked the teacher to rate the child on the Walker Problem Behavior Checklist (a checklist which allows for problem behaviors to be sub-divided into five categories: Acting-out, distractibility, immaturity, and disturbed peer relations).

At the end of each period of observation the child was evaluated by the nurse-practitioner. She used the following instruments for the evaluation: A Human Figure Drawing, which was scored "blind" by the clinical psychologist (JEC), the Beery Buchtenica Test of Visual Motor Integration, the Porteus Maze Test, the digit span subtest of the WISC, and the Quick Neurological Screening Test. This battery of tests was selected partly for ease and objectivity of scoring, and partly because it consisted of tests likely to detect change of degree of MBD symptoms.

Conners<sup>4</sup> found that the Human Figure Drawing, Bender-Gestalt Test, and Porteus Mazes revealed a difference when MBD children were treated with stimulant drugs. We substituted the Beery-Buchtenica VMI for the Bender for ease of scoring and administration. There is no fundamental difference between the two tests; both are tests of the ability to copy abstract geometric figures.

### Testing 'Soft Signs'

The Quick Neurological Screening Test is a test of motor coordination, laterality, and other of the so-called "soft signs" that have been considered to be associated with MBD. We chose this method of neurological examination because its precise structure lent it to repeated use, and its objective and quantitative scoring was easy to treat statistically.

The nurse practitioner was prepared to administer these tests by reading and by personal instruction from the other collaborators. She did all the evaluations blind. She knew, of course, that the subject was on a diet, but not which diet he

was on. All diet counseling, etc., was managed by the pediatrician, who did no evaluation.

After each diet the mother was asked to report any problems or observations and was asked to judge whether her child had shown "noticeable benefit" from the diet. It was necessary of course, to try to convince each mother that both diets were potentially beneficial. Conners has discussed the ethics of that. In my own mind, we are under an ethical duty to "confess" this deception now that the study is over. This we have done. Several of the mothers were aware of the Feingold hypothesis, but none had tried the K-P diet.

Of course, no charge was made for any of these visits, since they were primarily for research and not primarily for the child's benefit.

Eighteen patients came for the initial visit. Of these, 16 actually entered the study. Six patients dropped out of the study, some having completed all but the last visit. Ten children completed the study. All results are based on these children.

### Results

Diet compliance was generally reported as "good—perhaps one or two slip-ups." Responders and non-responders did not differ in compliance, and there was no difference in compliance between the two diets.

There were no children whose mothers considered them benefited by the placebo diet. There were six children whose mothers considered them to be benefited by the K-P diet. This difference is statistically significant ( $X^2=7.62$  with Yate's correction).

It was our impression that the mothers really tried to be objective about this. Two or three commented, with respect to the placebo diet, "I really tried to see some improvement on this diet, and I just couldn't," or, "He did a lot better on the other diet than he did on this one." Two mothers made the interesting observation that their child, who usually had two or three headaches a week, had none on the K-P diet. In both children, headaches resumed when the diet was discontinued.

Data on objective measures of the children's behavior are tabulated in Table I.

It is readily seen that the parents index scores confirm the mother's observations. The mean hyperactivity score for the baseline period was 14.8, for the placebo diet period 13.8, and for the K-P diet period 11.2. Scores during the K-P diet period are significantly better than during the baseline and placebo periods do not differ significantly from each other.

No other statistically significant differences were found. Scores on the Human Figure Drawing,

Beery-Buchtenica Test of Visual-Motor Integration, Porteus Mazes, WISC-Digit Span, Quick Neurological Screening Test, and Walker Problem Behavior Checklist all failed to provide evidence of difference between treatment groups.

## Discussion

It is obvious that the mothers perceived the children to benefit from the K-P diet. Although the mothers did not all note great improvement, six out of 10 noted some improvement. It is possible, of course, that this is due to effects other than the results of diet treatment. For example, even though mothers were supposed to be "blind" to the two diets, they read the newspapers. One or two recognized the Feingold diet. On the other hand, it seemed during the interviews that most of the mothers really tried to judge objectively. One or two commented on the placebo diet, "I really tried to see some difference on this diet, but I couldn't." We believe many of them accepted the placebo diet as an alternative mode of treatment. For this reason, we are reluctant to discount their observations totally as placebo effect.

## Why Not Teachers?

But if the K-P diet really produces an effect, why couldn't the teachers perceive it? The teacher rating scales indicate, if anything, greater improvement on the placebo diet. It may be, however, that the Ritalin is effective enough that the teacher is unable to see any difference as a result of different diet treatment. Perhaps, when the Ritalin has worn off in the late evening, the differences are more apparent to the mother.

Why did the objective studies not reveal a difference? First, the group is so small that it really is difficult to obtain significant results—so the probabilities of failing to find a difference when one exists are great. In a small study like this, much more weight can be given to a positive finding than to a negative one. Or it may be that the tests we used are simply not sensitive enough to detect the effect of treatment. Or it may be that the effects of the diet are more pronounced at the *behavioral level*—attention and concentration span, activity level—than at the perceptual level. Or it may be that the diet produces no benefits, and that the apparent difference on the mother's observations are due to the placebo and Hawthorne effects.

One thing is certain: the Feingold hypotheses is a difficult one to test. It is simple enough to keep the evaluating clinician "blind," but how do you keep the mother blind when she has to prepare the

meals? Yet the mother's observations are quite essential to determining suspected of producing MBD symptoms is clearly a superior experimental approach<sup>5</sup>. It is also difficult to ensure diet compliance. In addition the drop-out rate from studies of this type is quite high.

## Slight Benefit

Wender<sup>5</sup> has discussed the findings of well-controlled studies by other observers. The general consensus is that there may be some benefit from the Feingold K-P diet, but if so the benefit is slight and not easily demonstrated. The results of this paper are compatible with this conclusion; or, alternatively, the improvement noticed by the mothers may be merely placebo effect.

There is a certain appeal to the use of a diet free of food additives as a means of treatment. After all, who would argue that artificial flavors and colors are beneficial? (Who, other than the food manufacturers?) On the other hand, the diet is no simple solution to the problem of MBD, even in the children whom it seems to benefit.

Although six children were thought to benefit noticeably, only two or three felt that the benefit was sufficient to warrant the extra trouble of the diet. Several of the children did not accept the diet well, either. Some families, however, found the K-P diet to be hardly any trouble at all. Obviously, if this mode of treatment is of marginal benefit, one factor to be considered is whether the diet is easily adaptable to the family's customs and habits.

The principal "side effect" of the diet is the difficulty some of these children had visiting friends' houses. The friends would often serve Kool-ade, or apples, or hotdogs with barbecue potato chips and pickles for supper. The children in the study were faced with a dilemma; break the diet, or not eat with their friends. Thus, for some of the children, the diet resulted in a significant impairment of the child's social life. It is unfortunate that artificial additives are so widely distributed in the American diet, but they are. Certainly the degree of distress that this situation causes a child must be considered a disadvantage of this mode of treatment, and weighed against the possible benefit of the diet. If the diet were dramatically effective for a child, this would probably decide the matter. In our (limited) experience, few children benefit dramatically from the diet, and for those who receive minimal benefit the social side effects must be considered.

## Follow-Up

A follow-up interview by telephone was carried out six months after the study was concluded. It revealed the following:



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**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: Possibly Effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension. It should be used as an adjunct to other appropriate measures such as proper diet and antacids.

**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlordiazepoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus); may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With over-dosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. G.I.: Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

One child is still on the K-P diet. He has discontinued his Ritalin and is doing very well with both behavior and school performance.

Two other mothers feel the diet was definitely beneficial, and are considering resuming the K-P diet. They have not been using it because their work schedule makes diet preparation difficult. One of these was a child whose headaches responded dramatically to the diet. These children are still on Ritalin.

One child has shown dramatic improvement and is on neither Ritalin nor diet therapy.

Six children are doing fairly well on Ritalin. Two of these children were judged by their mothers to be "diet responders" but benefit of the diet was not thought sufficient to continue the diet. The other four were non-responders.

Thus, results of this study are comparable to those of the published studies. The Feingold K-P diet may be of some benefit to some children who have MBD. It seems unlikely, however, that the diet is of great benefit to very many children. It is also possible that the benefits are largely placebo effect. More studies need to be done.

## Conclusions

1. The Feingold diet may be of some benefit to at least some children with MBD. If so, it seems to be primarily beneficial in the improvement of attentional deficits and hyperactive behavior. It seems to have no effect on the objective tests we used. It is also possible that parent's reports may reflect merely placebo effect. More studies are badly needed to settle this point.

2. The Feingold hypotheses is a difficult one to test. The worthlessness of an uncontrolled study, which replies primarily on the parent's impressions, is clearly demonstrated by this study. Without the teacher's input and the objective data the present study would show a very impressive benefit from the K-P diet. The fact that the teacher and the tester do not perceive this benefit certainly calls it into doubt. The need for really effective double blinding is also shown by this study.

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# Stroke Registry

Jay P. Mohr, M.D.\*

Through a contract sponsored by the National Institutes of Health, four centers have been awarded to form a three-year pilot registry in stroke, one being the Department of Neurology at the University of South Alabama.

The purposes of the project are to develop a protocol which will establish a collaborative data bank on the clinical and laboratory details of cases of stroke; refine a clinical vocabulary and method of data input; and test the ability to aggregate data from different institutions of uniform quantity and quality. The goals are to develop a data bank that will prove useful in clinical decisions and for support clinical research.

If successful, longer range goals can be approached, including a computer-based consultation service, estimates of the cost-effectiveness of each a system, assembly of a large enough cohort of less frequent types of stroke to permit a finer description of such groups, and development of a data base for prospective therapeutic studies and prognosis.

Available computer technologies, already in use in other disease types, are to be used to develop the data bank in a central registry to which the individual participating institutions will contribute.

The individual centers will contribute data from cases personally

encountered by the principal investigators. The effort from South Alabama will involve not only all cases of stroke admitted to the University Medical Center, but those occurring in the populations of Monroe County and the Mobile Bay communities of Baldwin County.

Access to those physicians and surgeons caring for this population has been kindly provided through the efforts of the Family Practice Department at the University. The project goals will be achieved only through the continued cooperation of the physicians and surgeons in these counties, who have generously consented to help in identifying such cases and give the investigators access to them.

As cases are encountered and data entered, a text summary generated by the computer will be sent to the referring physician. A cumulative data sheet will be available at any time for the physicians or for the patient when this information is needed. Similar data from follow-up clinical evaluations at three month intervals will be made available.

It is expected that a clear picture should emerge of the incidence of stroke, the various subtypes, and the measures used in therapy for these populations. The project should sustain a steady contact between the clinical neurology investigators and the primary physicians, with mutually beneficial results.

## Prior Work

The South Alabama investigators had prior experience in developing the Harvard Cooperative Stroke

Registry (1) as neurologists at the Massachusetts General Hospital. In that study 364 (53%) of 694 patients were diagnosed as thrombosis, 215 (31%) as embolism, 70 (10%) parenchymatous hemorrhage, and 45 (6%) as subarachnoid hemorrhage from aneurysm or arteriovenous malformations. Lacunar infarction was diagnosed in 131 (36%) of the 364 cases of thrombosis while 233 (64%) had large artery disease, half of these being of carotid type. In broad terms, lacunar, carotid and vertebrobasilar thrombotic diseases occurred with about equal frequency among the cases of thrombotic strokes, indicating that none of these individual categories separately represent more than 15% of strokes, although in these groups fully 73% of the cases of transient ischemic attack prior to stroke occurred.

The incidence of embolism in this study was almost twice that of prior studies, a finding that reflects growing awareness of sources of symptomatic emboli from carotid atheroma, isolated valvular disease, mural thrombus from prior myocardial infarction, ischemic heart disease, and less well-defined sources. Discouraging findings included a lack of correlation between embolism size and frequency and duration of atrial fibrillation. There was a similar incidence of embolism in atrial fibrillation whether accompanied by valvular or ischemic heart disease. Most emboli involved the functionally important middle cerebral artery territory, perhaps because the middle cerebral is the least tortuous route for embolic

---

\*Professor and Chairman, Department of Neurology, University of South Alabama College of Medicine.





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Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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# Bentyl<sup>®</sup>

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Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage.** Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults:* 1 tablet three or four times daily. Bentyl Injection. *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

material to follow from an extracranial source. Emboli were most frequently documented angiographically when these procedures were pursued within 48 hours of stroke but only infrequently so when larger delays before study occurred. Systemic embolism only rarely was evident before symptomatic cerebral embolization.

Hematoma size proved a major predictor of clinical outcome. The small hematomas were frequently misdiagnosed as ischemic infarctions while the large hematomas produced such complex deficits that the traditional syndromes merged with one another to blunt the value of many classical signs. Cerebellar hemorrhage also occurred frequently, especially in a setting of anticoagulation. In these latter cases, many deficits characteristic of spontaneous cerebellar hemorrhage were so inconspicuous that the diagnosis was often difficult on clinical grounds alone.

The Registry project has already served to test many classical traditional syndromes, signs, frequencies, and correlations in stroke, with major pragmatic results. Further clarifications should result from the new study, this time having the added value of a population base for the data from South Alabama. A successful pilot study might lead to a larger project, one that could result in something approaching a statewide or even national data bank. We look forward to the data with scientific and pragmatic anticipation.

J. P. Mohr, M.D.  
C. S. Kase, M.D.  
Mobile

J. Mohr, J.P., Caplan, L.R., Melski, J.W., Golstein, R.J., Duncan, G.W., Kistler, J.P., Pessin, M.S., and Bleich, H.L.: The Harvard Cooperative Stroke Registry: a prospective registry. *Neurology* 28: 754-762, 1978.

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- ☒ All of the above

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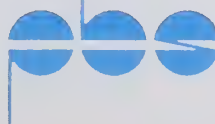
- ☐ Uncontrollable external factors (i.e. inflation, government regulations, etc.)
- ☐ Poor Management
- ☐ Fate
- ☒ Normal problems associated with a growing practice

## Prescription:

- ☐ Early retirement
- ☐ Increase manpower (more overtime or additional personnel)
- ☐ Turn over your confidential records to a service bureau who knows nothing about your practice and trust that your work will be processed with the same care and consideration that you expect from your office personnel.
- ☐ Buy an expensive computer with a "medical" package from one of the "big" computer companies and alter your practice to conform to the computer.
- ☐ Buy an expensive computer and hire several expensive programmers to develop your own system regardless of how much time and money it takes to complete.
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# *Inaugural Address*

*Mrs. Ben Johnson, Jr.  
President, American Medical Association  
Auxiliary*

"Oh God, give us serenity to accept what cannot be changed, courage to change what should be changed, and wisdom to distinguish one from the other."

Those words of American theologist Reinhold Niebuhr, penned in 1934, have endured several decades. They were distributed to millions of World War II servicemen, have become the motto of Alcoholics Anonymous, are used by the National Council of Churches, and have been reprinted on thousands of Christmas cards.

Why are they enduring? Because they tell us in plain terms how we can cope with a world that changes constantly. They speak of purpose, courage, and optimism—three things we need if we are to be able to change with a changing world. Whether we like it or not, this world does not stand still, does not stay the same. And we must be aware of that fact and open to opportunities to keep up with the times.

Recently I heard a physician talk about a new building that was being put up in his community. When it was completed, grass was planted, but no sidewalks were laid. The builders had observed that people do not always walk on pre-arranged

sidewalks, but tend to make their own paths. After a year had gone by and paths had been made, the sidewalks were put down where the people had walked.

As I listened to that story, I thought about the AMA Auxiliary. I wondered if perhaps our sidewalks are too well arranged to permit new ways of moving. I wondered if we need to rearrange our sidewalks and rethink some of the ways we do things. Because I believe if we are to remain a strong organization we must have a willingness to change.

And I would ask you to move with me in this changing time—with purpose, courage, and optimism—so we will make new paths which will become permanent walkways for those who follow.

## **A New Path**

When the Auxiliary was formed some 57 years ago its leaders blazed a new path. But they knew who they were and where they wanted to go because they had stated their purposes—to extend



the aims of the medical profession, to assist in entertainment at medical conventions, and to promote fellowship among doctors' families.

As we read those today, we know we have changed as an organization. How our programs are broader as we assist in programs of the AMA that improve the health and quality of life for all people; promote health education; and encourage participation of our members in activities that meet health needs.

These are purposes which allow room for growth. They enable us to do what other organizations cannot do. They give us a common goal to work toward—to help the people in our communities, as well as the medical profession.

These are not self-serving purposes. I heard someone ask "What will the organization do for me?" If we believe our purposes, we must turn that question around to ask "What can we do for the organization?" The answer, of course, is *everything*. Because the AMA Auxiliary needs us and our support of its purposes if we are to be successful.

We are members because we are married to physicians and because we believe in volunteer work and in service to others. We might say we believe we must pay for the space we occupy. And we must believe in the AMA Auxiliary and its purposes if we are to be a strong organization.

As many of you know, I am enthusiastic football fan. I follow my teams, college and pro, watch them on TV and get to the sports page first. As I read an article about the Dallas Cowboys and some of the problems they have had in recent years trying to rebuild for a winning team, I thought of Auxiliary. The article said "We had some problems about four years back. We were out of the playoff for the first time since '65. We weren't filling the stadium and things just were not going right. So, we started having meetings. We looked at the way we were doing things. Top to bottom. We weren't looking for somebody to fire. We wanted to see if we'd gotten a little set in our ways. Hadn't been keeping up."

The next year the Cowboys were in the Super Bowl. Their evaluation and rethinking made them a winning team. They were not afraid to change to accomplish their goal.

### Mindful of Goals

Well, we are not yet out of the playoffs, but we are not filling the stadium either. And perhaps what we need is a willingness for purposeful change to accomplish our goals. Now, I do not want you to think we should change just for the sake of change. We have many important, viable programs which need our whole hearted support.

We must continue our efforts to raise funds for AMA-ERF. Your work this past year was outstanding, and we thank you for it. And since this was my first National Committee Chairmanship this program is dear to my heart.

The need is great and we must do even more. When our daughter was graduated from medical school a few weeks ago, 161 students graduated with her. At our state school, it costs approximately \$25,000 for each student to complete the medical course.

\$25,000 of somebody's money, parents, spouse, loans, or scholarships. We know that medical school is not only for the rich, and it must not be. But if our organization is not willing to raise needed funds for students and medical schools, many will not be able to afford it. This program will be continued.

Another vital program is in our Health Projects effort. We have only to look at the 800 projects in the Project Bank to know how many people are involved in this area. Our programs speak for themselves. The new "Shape Up" Campaign is something we must all promote. It is going to help keep people physically fit and in good health, and that is, after all, our reason for being. Your state reports told of the many projects to help others lead quality lives. We need these and more.

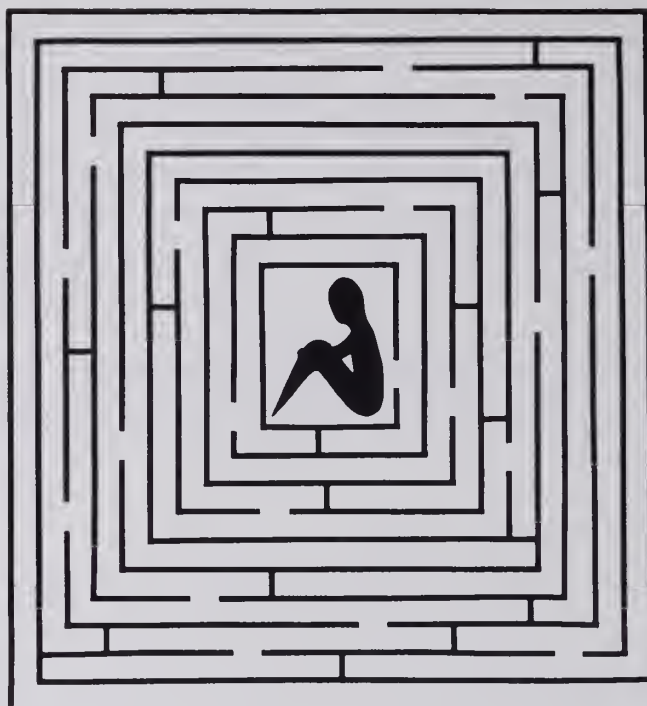
Our immunization program must also be continued. Even though the HEW campaign is reaching its goal of 90% immunization for children, more children are born every day that must be immunized. We must keep reminding parents of this important way to protect the health of their children.

We must redouble our efforts in the area of legislation. This is such an important program and today more than ever before the medical profession needs our help. For many of our members this is an important area of participation and concern. What better way can we be visible in our communities and with our legislators than by letting them know we care what kind of legislation is passed that will affect health care.

When I met with Drs. Hunter, Nesbit, Gardner, and Sammons last March, I told them about these programs and they expressed their appreciation for our efforts, and urged us to continue especially in these areas.

Let us constantly remember why we are organized and what we have to offer, and we must have faith in our programs to accomplish our purposes. But would that we never become so set in our ways that we will not have the courage to change.

When the Auxiliary was begun in 1922, our Founders had courage. Back then they



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"respectfully requested" the approval of the AMA to form the organization. It no doubt took more courage for them to approach the AMA than we can fully appreciate.

Courage is what we need today to keep up with the changing times. With all the criticism being leveled at the medical profession, we must speak out and answer the critics who surround us. For we must uphold the medical profession, our profession because we married into it, and its standards. We must do all we can to see that the escalation of health care costs is held down by educating people that health care *does* cost, and that the way to avoid the cost is to practice preventive medicine by keeping healthy.

### A Difficult Decision

It really took courage for the National Board to recommend the dues increase to you. We thought long and hard about it, for we know you are having auxiliary financial problems of your own. But we know that in the face of mounting inflation, we must have more money to continue our progress. We must move forward, despite rumblings that we will lose members. In truth, we lose members with or without a dues increase. But we also gain nearly enough new members each year to offset the loss. Remember that. Our organization and its purposes are meaningful to others and make them want to join with us.

It has taken courage for you to approach your medical societies to offer your help. Yet we increasingly see that they are utilizing your members and your services. I think we are able to accomplish this because we persevere, we won't let go, we keep on plugging, maybe we are just plain 'naggers.' Now we see 37 Texas auxiliary members serving on medical councils, 7 in Massachusetts, and many more in other states. Perhaps the medical societies did not know how to use us until we told them. And now that they know, they are asking our help in many areas.

We need to keep in mind that the medical societies are made up of our spouses. We can talk to them and we must if we are truly to become their partners. And we must make sure that all of the spouses of medical society members are part of the auxiliary.

We face many challenges—not the least of which is recruiting members. We must persuade those who no longer believe in voluntarism that it is a worthwhile, enriching career to choose. Some agree with Erma Bombeck who wrote recently that 'perhaps volunteers are a luxury in a world that has become very practical.' We do not believe that, and

we must have the courage to say why and to point out that because we belong to the AMA Auxiliary it does not mean that we have no lives of our own or that we are merely extensions of our spouses. We must tell prospective members that the AMA Auxiliary provides us with unique opportunities for service, and it is the only organization for which we need no other qualification for membership except that we are the spouses of physicians.

One of our Alabama board members said, "People say we are all the same because we are MDs' spouses." I say that it is our only common denominator and that we are as diverse as any group in America. That very diversity is our strength.

We must not tune out the young people, young physicians' spouses, foreign medical graduates' spouses—just because they walk to a different drum—are different, and because some times they not only comfort the distressed but may distress the comfortable as well. We must change and accommodate different lifestyles. We do not all want to do the same thing, nor should we.

Our purposes can give us the courage to do our work and to change meaningfully. But there is one more quality we must have—and that is optimism to know that our changes will make us more effective.

There is a group called the vision-smashers. We have all met them. They are the ones who tell us that things simply cannot be done, that it won't work, then if it doesn't work they say—I told you so—or—I didn't vote for it.

I know that you and I have vision for our organization and that vision is vital if we are to be viable, active, and effective. As Mrs. George Bayliss, President General of the DAR wrote recently, "The potential for further service and dedication might be likened to the popular song 'How Deep is the Ocean, How High is the Sky?'"

That is our potential if we have optimism—unlimited.

Think of the 40,000 women in medicine, and most of them are married. Our potential is in their spouses—attorneys, business men, educators, all capable people. At one convention I attended this year, a male county president planned a breakfast—menu, flowers, seating, everything, and he did it very well. We have a tremendous potential for increasing our effectiveness by interesting these spouses to join with us. They will offer new thinking, new abilities, and new talent.

And the spouses of the medical students and residents. We keep them informed through our newest publication, *Horizons*, and we must continue our efforts to interest them in Auxiliary.

## The Vital Link

The Auxiliary can be the link to medicine for those who are widows, and we must make every effort to contact these members and get them back to work. One widow, in New Jersey, is on the Board of an HSA as a consumer, an important spot. There are things for them to do that only they can accomplish.

At the national level, we constantly strive to add programs which will increase our potential. The Leadership Confluence in October is one of these. We improve it every year and we are grateful for your help in assuming some of the expenses of your state attendees to this meeting, as well as to this Convention, because it helps us to grow.

Our Regional meetings, too, help develop our potential. These are the meetings at which state presidents and presidents-elect and nominees meet together to discuss mutual problems. We look forward to seeing many of you at our first Regional "CLUSTER" meeting next February here in Chicago where all the regions will meet together.

Developing our potential means willingness to change. Everyone cannot do the same thing or stay in the same place. Every chairman cannot continue in the same job from year to year, although I must admit it is tempting. I recall when I thought I would like to continue AMA-ERF forever. But this limits growth, both of the individual and of the auxiliary. This year, we have covered nearly every state in our national committee appointments, giving almost complete representation on the national level. It would be wonderful if every state were represented every year and this is a worthy goal.

We know that you look to the National Auxiliary for leadership, and we will not let you down. One of the most gratifying things about the AMA Auxiliary is to see an idea taken from National, developed at the county level and then returned to National through the Project Bank, so that good development of a project is available to others. This kind of input and exchange of ideas are what make us effective.

Purpose, courage, optimism, and confidence as we approach the '80s—these are the things I have as I stand before you today. I have not yet the experience of our national past presidents, I am only standing where they have stood. But I have all of you to help me, and I know we will move forward to greater heights of service, aware of changing times and willing to change with them to accomplish our goals.

And for this great honor—how can I thank you—how can I tell you what is in my heart?

# Quinamm™

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## Brief Summary

**INDICATIONS:** For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

**CONTRAINDICATIONS:** Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

**PRECAUTIONS:** Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication. Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

**ADVERSE REACTIONS:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

## DOSAGE AND ADMINISTRATION:

1 tablet upon retiring. When necessary,

1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

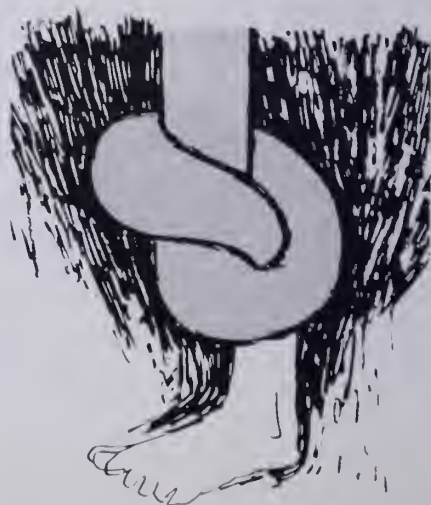
U.S. Patent 2,985,558

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each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

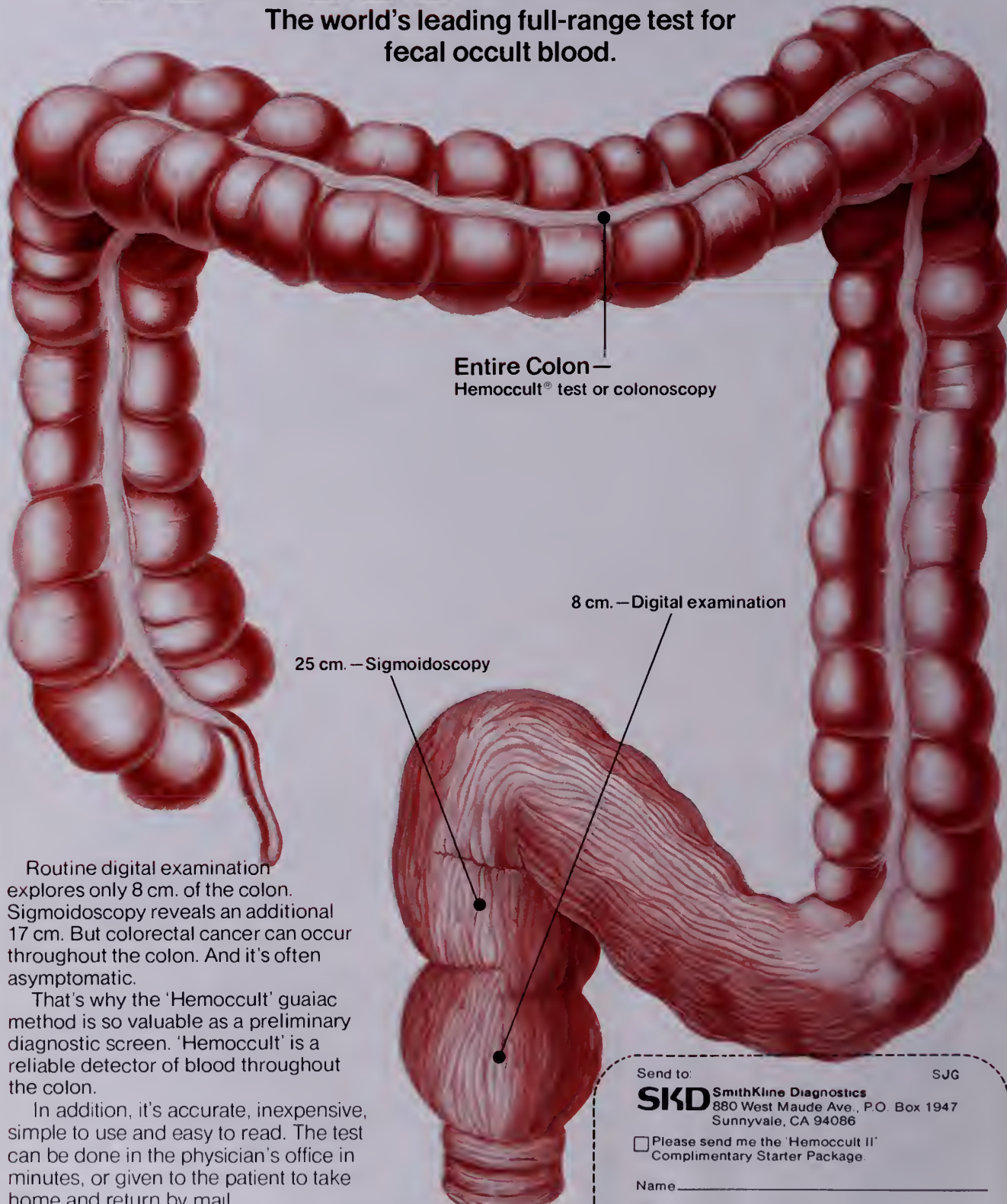
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See opposite page for prescribing information

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# An Assessment of Adverse Effects of Methyldopa and Propranolol

by  
Schnaper, Harold W. and  
Collins, Mildred A.\*

## Introduction

Methyldopa and Propranolol both are used to treat hypertension. Both are drugs of choice of American physicians. They are indicated as Step 2 drugs in antihypertension step-care regimens. (Dew Publications No. 77-1088). Both are good control drugs with controllable side effects. They are able to control the blood pressure in 86% or more of the patients with hypertension.

The progress of hypertension therapy over the last 20 years has been great and numbers of new antihypertension drugs are available. There is need to collect evidence about the adverse effects of these drugs used in clinical situations.

This is a preliminary survey of 100 patients in a clinical experience with propranolol and methyldopa. As the antihypertension drug of choice, trade names are Inderal and Aldomet.

Methyldopa is an effective antihypertensive agent which effects the central nervous system by the stimulation of alpha-adrenergic receptors. It is also a very potent drug whose effects are characterized by minimal postural hypotension, and decrease in systemic vascular resistance, and no significant change in cardiac output. Methyldopa replaces dopa in the metabolic pathway leading to the synthesis of norepinephrine. Because of the interference of norepinephrine it is called a false transmitter. The stimulation of inhibitions of sympathetic outflow and peripheral vasodilation causes the major effect of mild sedation or drowsiness in 50% of the patients due to depletion of the brains catecholamines.

Side effects such as diarrhea, dry mouth, blurred vision, nausea, and sleepiness are the more common ones occurring with the use of this drug. According to Moses (1978) other adverse effects are edema, vertigo, nightmares, impotence, nasal stuffiness, and GI Symptoms. Impotence may cause discontinuance of the drug. Orthostatic hypertension can also be a very real problem. Less common is a Coom's positive hemolytic anemia, drug fever and abnormal liver function.

According to Schnaper and Oberman (1976) the adverse effects in a double blind study of 64 patients were similar to those reported in the literature earlier. But a few patients in the study developed febrile reactions, and were dropped from the study due to the fever. However, there was no evidence of electrocardiographic, ophthalmoscopic, or chest X-Rays abnormality that could be attributed to the therapy. The latter could indicate severe end organ damage.

Meller and Reid (1976) reported the occurrence of granulomatous hepatitis developing in response to Methyldopa therapy. It was stated that this was possibly the first case reported. Hepatitis is indicated in the literature as a possible side effect, but very little evidence is available to indicate the frequency.

## Extensive Literature

The current experimental literature on propranolol is more extensive which is possible due to methyldopa having been in clinical use much longer whereas the use of propranolol has only been used 14 years. According to Moses (1978) propranolol was first used for the treatment of hypertension in 1964. It is a potent blocker of beta-adrenergic receptors. The antihypertensive effects are probably related to decreased cardiac output, inhibition of renin released by the kidney and reduction in sympathetic outflow from the brains vasomotor center.

In a literature review by Morrelli (1973) he states that package inserts for propranolol clinical trails report it is used for angina pectoris, thyrotoxicosis, myocardial infraction, the beta-adrenergic hypertensive state, parkinson's disease, anxiety,

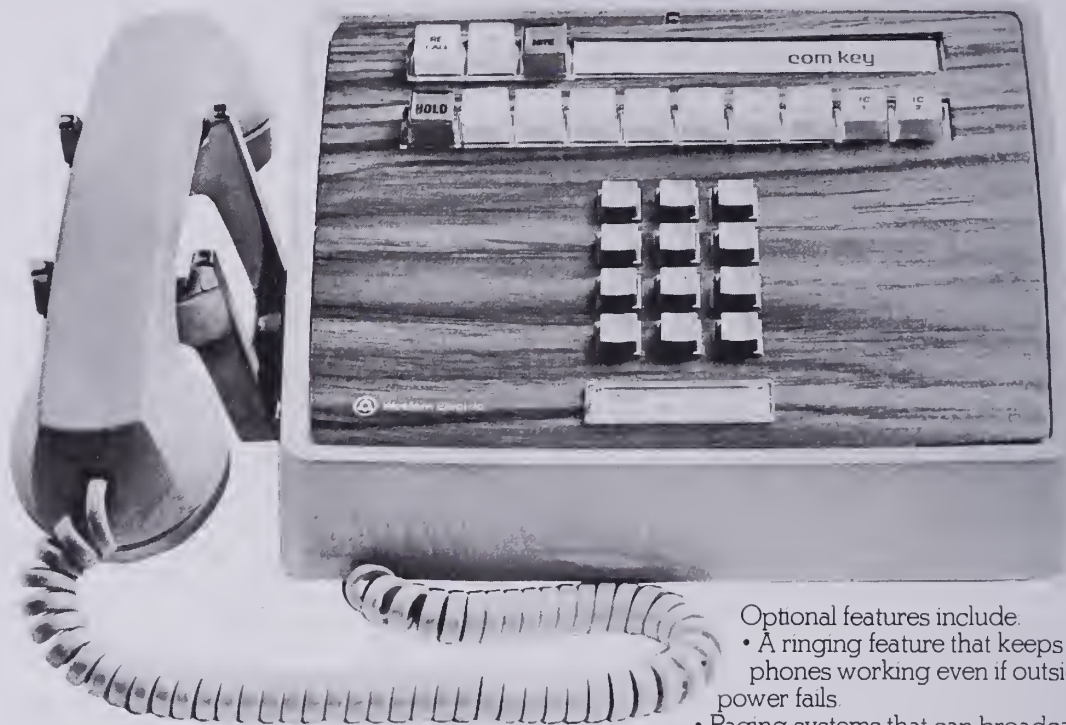
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\*This work was done under the direction of Dr. Harold W. Schnaper, Professor of Medicine and Director of Center for Aging, University of Alabama, Birmingham. Mildred A. Collins, Assistant Professor of Biology, Stillman College was a student trainer under a Minority Hypertension Training Grant No. 1-T32-HLO-73905-01.

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migraine, pulmonary stenosis, digitalis intoxication, neurocirculatory asthenia, LSD-induced anxiety states, hemorrhagic shock, acne vulgaris, phosphorus poisoning, narcotic withdrawal symptoms, alcohol addiction, glaucoma, tetanus, Fallot's tetralogy, and many others. It is used for at least 34 disorders among which is the reduction in the rise of systolic blood pressure during human coitus.

Zacharias (1972) reported on a study of the use of propranolol in treating 311 hypertension patients over a 5½-year period. The side effects were considered mild, and the drug well tolerated. The observed side effects were vivid dreams, insomnia, hallucinations, impotence and claudication. Postural hypotension, did not occur with sufficient severity to limit the dose nor to withdraw propranolol. Withdrawal occurred due to fatigue, diarrhea, indigestion, neurological dizziness, bronchospasm, depression and worsening claudication.

Hollifield, Et Al (1976), studying the mechanism in essential hypertension of 40 patients at Vanderbilt University, at dose levels of 320 mg daily on patients who were high renin essential hypertensive, observed the following side effects occurring; depression, diminished libido, impotence, difficulty in concentration, tremors, insomnia, sluggishness and vivid dreams.

Sacharias (1976) studied a patient population of 400 to determine the acceptability of propranol and the occurrence of side effects. He found that severe side effects were found in less than 10%, and that dose limiting effects were cold extremities, indigestion, fatigue, vivid dreams, insomnia, hallucinations, neurological, depression, impaired sexual activity, diarrhea, worsening claudication, bronchospasm, and heart failure. The above side effects occurred with the use of propranolol plus diuretics. They also occurred with the addition of other drugs as methyldopa hydralazine, clonidine and prazosine.

Propranolol is useful in cases where there is a need for combination therapy since small total dosage may be used to maintain good blood pressure control.

### Procedures:

The records of 100 patients maintained and treated by clinician were surveyed. All of the study population were treated for hypertension with propranolol and methyldopa for a period of one year. The following data were extracted; identification code, sex, age and nationality, initial blood pressure, and blood pressure at the time of last visit; dose levels of antihypertension drug, other drugs taken, and side effect. Of the total clinic

population of 900; 50 were analyzed for methyldopa and its side effects. Of this total number, 34 were found to be taking propranolol for a period of one year.

All of the patients who received either methyldopa or propranolol for the past year were considered. The population contained a large number of patients on methyldopa who also had psychological problems noted on the record. These were eliminated where possible from the data group. The patients on propranolol in the data group represent 3.6% of the clinic population and those on methyldopa represents 5.5% of the total clinical population. Average ages, dose levels, initial blood pressures, and final blood pressures were calculated on a Monroe Calculator. Numbers of patients taking either of the drugs plus diuretics were tabulated; antihypertension drugs plus a diuretic and other drugs were also counted. Side effects were categorized for the number of occurrences and severity.

Side effects are defined in this study based partially on classification of effects by Zacharias (1976) and by the writer. Severe is defined as those effects which are deleterious, psychologically or physiologically, and those that cause a decrease or

## GENERAL RESULTS

TABLE I

VARIABLES	METHYLDOPA	PROPRANOLOL
Number		
Total	50	34
With Complaints	32	22
Without Complaints	18	12
Average Age	55.45 ± 11	49.14 ± 12
Average Dose Level		
Mg/Day	1,029.80 ± 57	150.85 ± 119
Average Initial BP		
mm Hg	147.15 ± 57	143.74 ± 18
	96 ± 10	96 ±
Average Final BP		
mm Hg	130.58 ± 24	128.11 ± 24
	88.38 ± 96	88.58 ± 10
Drug + Diuretic	27	4
Drug + Diuretic =		
Other	23	30
Percentage of Clinic		
Population on		
Antihypertension		
Drug	5.5%	3.6%

# The Maker

## Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

*MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.*

**FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were**

not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

---

*MYTH: Industry favors only "expensive" brand names and denigrates all generics.*

**FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.**





# Matters.

*MYTH: Generic options almost always exist.*

**FACT:** About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

*MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.*

**FACT:** Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

*MYTH: Drugs account for a major portion of the rise in health care costs.*

**FACT:** Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

*MYTH: Government intrusions into the marketplace will save tax money.*

**FACT:** Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

## The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

## The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

The logo for the Pharmaceutical Manufacturers Association (PMA) consists of the letters 'PMA' in a bold, stylized, serif font. The letters are closely spaced and have a slightly three-dimensional appearance.

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withdrawal of the medicine. These are tachycardia, nausea, dizziness, claudication, insomnia, blackouts, hypotension, impotence and rapid respiration.

Moderate side effects are defined as those that might lead to other disorders in the long run and are difficult to tolerate. The effects might cause a reduction in the dose level. These are exemplified as weakness, sleepiness, electrolyte imbalance, high blood sugar, numbness in fingers and toes, dyspnea and PND. Mild effects are defined as those easily controlled and mostly annoying as, indigestion, nasal congestion, urinary frequency, tiredness, and the sensorium effects.

**TABLE II**

**TOTAL OCCURRENCE OF SIDE EFFECTS**

COMPLAINTS	PROPRANOLOL	METHYLDOPA
<b>SEVERE</b>		
Impotence		3
Tachycardia	3	1
Nausea		1
Dizziness	4	13
Claudication	1	3
Insomnia	1	
Blackouts	1	1
Rapid Respiration		1
Hypotension		8
<b>MODERATE</b>		
PND		3
Electrolyte Imbalance	6	5
Sleepiness	3	5
Weakness		2
Numbness in Fingers and Toes	3	2
Dyspnea		2
High Blood Sugar	4	5
Increased SGOT		1
Constipation		1
<b>MILD</b>		
Indigestion		
Nasal Congestion	1	1
Urinary Frequency		1
Sensorium Effects (Lethragy)		3
Tiredness and Exhaustion	3	4
Increased Uric Acid	1	4

**TABLE III**  
**SIDE EFFECT**

COMPLAINTS	PROPRANOLOL	METHYLDOPA
Rapid Respiration		1
Constipation		1
Increased SGOT		1
Increased Uric Acid	1	4
Dyspnea on Exertion		2
Nasal Congestion	1	1
Heart Flutters	1	
High Urine Protein		1
PND		3
Lethragy — Lack of Energy (Sensorium)		3
Urinary Frequency		1
Numbness in Fingers and Toes (discoloration)	3	2
Electrolyte Imbalance		
High Na, Cl		
Low Potassium		
Hyperkalemia	6	5
High Glucose Levels	4	5
High Cholesterol	1	1
Glucosuria		
Light Headed		1
Tiredness; Exhaustion	3	4
Sleepiness; Heavy eyes; Drowsiness	3	4
Headache	3	7
Dizziness (Vertigo)	4	13
Weakness		2
Blackouts	1	1
Nausea		1
Insomnia	1	
Claudication	1	2
Postural Hypotension		8
Indigestion	1	1
Tachycardia	3	1
Impotence		3
Constipation		1

**Results and Discussion**

Patients on propranolol had an average age of 49, had an average medication dose of  $150.85 \pm$  mg/day with a dosage range of 40.240 mg/day, the average initial blood pressure of 143.74 over 93.35 and a final blood pressure of 129.11 over 88.58 mm Hg. These were four using a diuretic plus the anti-hypertension drug and 30 whose maintenance was

obtained on additional drugs. Drugs other than propranolol were Hydralazine Hydrochloride, Hydrogion, Metolazone, Hydrochloro thiazide, Allopurinol, Dyazide, Methyldopa, Chlorthalidone, and Prazosin Hydrochloride.

Twelve did not indicate any side effects, but 22 registered complaints and/or side effects which were recorded by the clinician in the records. Severe side effects indicated were; tachycardia (3), dizziness (4), claudication (1), insomnia (1), and blackouts (1). The moderate effects in six were electrolyte imbalance. They complained that they were sleepy (3), had high glucose levels (4), and indications of some numbness in toes or fingers (3). Those categorized as mild are noted in Table II.

There were a total of 1,700.00 patients using propranolol in 1977, which was .837% of the total population. But only .215% of propranolol sold was used for hypertension. (Personal communication with Ayerst Laboratories.) In this study population, a higher percent of the total were using propranolol for hypertension. A total of 3.8% of clinic population used propranolol.

The 50 patients on methyldopa were of average age of 55. There were 32 with complaints and 18 without any complaints. The average dosage of methyldopa was  $1,029.80 \pm 57$  with a dose range of 250-2,000 mg/day. In this group 27 were taking diuretics in addition to the antihypertension drug and 23 were taking diuretics plus other drugs.

Drugs other than methyldopa which were taken are Furosemide, Dyazide, Allopurinol, Propranolol, Hydrochloro thiazide, Metolazone, Pottasium Chloride, Hydralazine Hydrochloride, Spironolactone, Reserpine, Prazosine Hydrochloride, and Chlorthalidone. The average initial blood pressure was 147.15 over 96 with a decrease to a final reading of 140.58 over 98. This sample represented 5.6% of the total patient population (TABLE I).

Side effects are characterized as severe, moderate, and mild. The severe side effects noted were: 2 with claudication, 1 with Tachycardia, and 1 with rapid respiration. The moderate effects observed were: 5 with electrolyte imbalance, sleepiness, and high blood glucose. Two indicated weakness, numbness in the fingers and toes, and Dyspnea. There were 3 with PDN and 1 indicated constipation and 1 was found to have an increased SGOT level.

There were five different mild effects noted. Patients with side effects represented 2.44% of the total population. Side effects occurring most frequently were vertigo, headaches, and hypertension. Some of the more severe effects as insomnia, impotence, claudication and blackouts did not occur often, but when they did occur the dose levels were immediately decreased.

*Continued on page 49*

## Tenuate®

(diethylpropion hydrochloride NF)

## Tenuate Dospan®

(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma, Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecomastia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdose include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdose.

Product Information as of April, 1976

MERRELL NATIONAL LABORATORIES Inc  
Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL NATIONAL LABORATORIES

Division of Richardson-Merrell Inc

Cincinnati, Ohio 45215, U.S.A.

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**References:** 1. Citations available on request from Medical Research Department, MERRELL NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T. O'Dillon [Dillon], R.H. and Leyland, H.M. A comprehensive review of diethylpropion hydrochloride. In: Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp. 391-404.

# Merrell

9 4672 (1975/76)



**Overweight may not always be simple...  
complications can develop\*.**

**Complicated or not...**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

## **In uncomplicated overweight.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

\*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

# **Merrell**

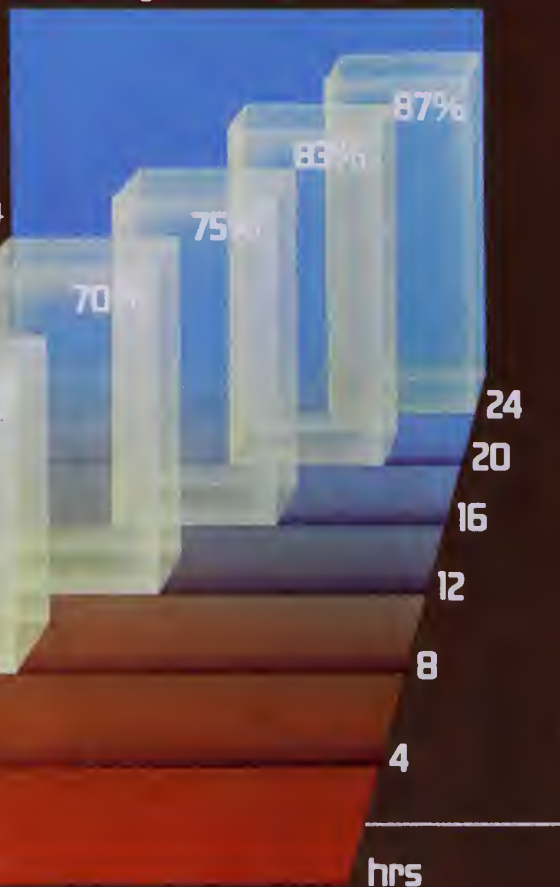


For prescribing information see opposite page.

## Important data on the pain of acute cystitis:

# In 87% of patients studied (303 of 349), Azo Gantanol® reduced pain and/or burning within 24 hours\*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

# Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for  
the pain

for  
the pathogens

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Fully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels at intervals; variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G disturbances.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** **Blood dyscrasias** (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); **allergic reactions** (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); **G.I. reactions** (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); **CNS reactions** (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); **miscellaneous reactions** (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the acute painful phase of urinary tract infections. **Usual adult dosage:** 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought. After relief of pain has been obtained, continue treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the orange dye (phenazopyridine HCl) will color the urine. **Supplied:** Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.



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Division of Hoffmann-La Roche  
Nutley, New Jersey 07110



# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE Age 47 University of Alabama, 1957 American Board of Certified seeking place in multi-specialty group, single specialty group, partnership or solo Available immediately LW-18574

...

FAMILY PRACTICE University of Mississippi 1978 seeking affiliation with a group practice in a moderate sized community greater than 10-15,000 population Presently a second year family practice resident LW-070279

...

FAMILY PRACTICE Age 50, Athens, Greece 1955, seeking practice in general, industrial or institutional in proximity to Mobile, Montgomery or Birmingham Available 4-6 weeks from date of agreement LW-071079

...

GENERAL PRACTICE Age 33 UAB, 1975, seeking general practice near TVA or Gulf Coast vicinity in a town with a population of 2,500-75,000 Available July-August 1980 LW-071179

...

GENERAL PRACTICE Age 26, McGill, 1977 National Board Certified, seeking practice in institutionally based multispecialty group or emergency room Available immediately LW-18968

...

GENERAL PRACTITIONER Age 37, University of Louisville 1967, American Board Certified, seeking practice in assistant or associate preferably in the Mobile area Available immediately LW-070379

...

GENERAL PRACTICE Age 43, University of Texas, 1968, seeking practice in general, assistant or associate, industrial, institutional, student health or salaried position Available immediately LW-090279

...

INTERNAL MEDICINE Age 32, University of Alabama, 1972; American Board Certified in Internal Medicine in 1975; seeking practice in general, specialty, partnership or group preferably in a town with a population greater than 20,000. Available October 1979 LW-090379

...

INTERNAL MEDICINE Age 28, Guntur Medical College, 1975; will be American Board Eligible in 1980; seeking practice in solo or emergency room. Available July 1980. LW-19346.

...

INTERNAL MEDICINE/RHEUMATOLOGY Age 30; University of Alabama, 1974, National Board Certified; American Board Certified; seeking practice in multispecialty group, single specialty group or institutionally based Available immediately. LW-18268.

...

NEPHROLOGY Age 30, University of North Carolina, 1975; National Board Certified, American Board Certified; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group or partnership. Available July 1980. LW-19316

NEUROLOGIST NEUROSURGEON Age 58 Duke University 1945 American Board Certified in Neurological Surgery in 1955 LW 100179

...

NEUROLOGY Age 41 Medical College of Calicut 1965, seeking practice in specialty group multi-specialty group or institutional in a medium sized town preferably in Tuscaloosa Jasper Ft Payne or Prattville Available September 1980 LW-100279

...

NEUROLOGY INTERNAL MEDICINE Age 30, Jodhpur Medical College India 1969, seeking practice in specialty in a town with a population of 50,000 Available July 1980 LW-100379

...

OBSTETRICS AND GYNECOLOGY Age 38, Stanley Medical College 1963, American Board Certified Available immediately LW-070679

...

OPHTHALMOLOGY Age 32, Kansas, 1974 American Board Eligible in 1980 seeking practice in partnership, single specialty group or multi-specialty group Available July 1980 LW-16895

PATHOLOGY Age 50, Medical College of Virginia, 1956, American Board Eligible seeking practice in single specialty group institutionally based or research Available October 1979 LW-17027

...

RADIOLOGY Age 32 University of Alabama, 1973, American Board Certified, seeking practice in single specialty group partnership or institutionally based Available July 1980 LW 17661

...

SURGERY GENERAL Age 31 University of Alabama, 1974 American Board Eligible 1980, seeking practice in single specialty group, partnership or solo Available August 1980. LW-18156

...

SURGERY GENERAL Age 30 University of Alabama, 1974 seeking a surgical partnership or group practice, however will also consider exceptional opportunities in solo practice Available July 1980 LW-070779

...

INTERNAL MEDICINE GASTROENTEROLOGY Age 30, Baylor, 1975, American Board Certified in Internal Medicine, seeking practice in specialty assistant or associate in a town greater than 100,000 population Available August 1980 LW-080179

## PHYSICIANS WANTED (Opportunities for Practice)

### OPPORTUNITIES FOR GENERAL PRACTITIONERS

Town of 1,000 population, less than 10,000 trade area in Central Alabama, nearest large city 40 miles—population of 200,000; nearest hospital 20 miles, last physician in town died 12 years ago, equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming, 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting PW-09178

...

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries, 2 churches, 2 schools, social activities include service clubs and country club Presently all medical services at the family practice residency training program on a rotation basis The clinic is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179

...

Town of 2,500 population; trade area 50,000; North Alabama, one semi-retired physician in town; one physician died recently, 2 hospitals in town, nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378

INTERNIST Excellent opportunity for association with a multi-specialty clinic in southeast Alabama Excellent fringe benefits from our professional corporation Quality schools and churches in the city with good recreational opportunities. PW-09478

...

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available Invitation to visit with expenses paid will be directed to those who qualify PW-26

...

GENERAL PRACTICE & O.B.—Opportunity for a general practitioner who will deliver babies 67 bed hospital is accredited, now has 150 deliveries per year Town is located in northwestern section of the state, population 5,000 plus 10,000 trade area Nice, modern office space available PW-066179.

...

PEDIATRICIAN—Wanted to join Board Certified, established practicing pediatrician with extensive practice in general pediatrics, pediatric allergy, consulting pediatrics Outstanding geographic, economic and professional opportunity Minimal night & weekend work due to cooperative arrangements. PW-100479.

## CORRECTION

*Editor, The Journal:*

Thank you for publishing our paper on Interesting Obstetrical Cases in the August issue. We regret to say that the dose of magnesium sulfate (line 5 on the top right hand side of page 28) is incorrect.

The proper dose should be 4 gm *intravenously* (slowly over the course of twenty minutes) followed by an intravenous drip of fluid containing magnesium sulfate at a rate as to provide at least 1 gram of magnesium sulfate per hour. If anuria or absence of reflexes should occur, the  $MgSO_4$  should be discontinued.

Thank you for the opportunity to make this correction.

Bruce A. Harris, Jr., M.D.  
John F. Huddleston, M.D.

SPORTS MEDICINE FOR THE PRIMARY CARE PHYSICIAN is the theme for the 21st AMA National Conference on the Medical Aspects of Sports, Jan. 12 in San Antonio, Texas. Experts on sports medicine will discuss topics such as women in sports, heart evaluation of the young athlete, the diversity of injuries and their prevention, the role of radiology and nuclear medicine in evaluating athletic injuries, and violence in sports. Registration fees are \$60 for AMA member physicians; \$90 for nonmember physicians; \$30 for AMA member interns or residents; \$45 for non-AMA member interns or residents; \$10 for medical students; and \$40 for allied health professionals.

## Wanted: Physicians who prefer medicine to paperwork.

We are looking for dedicated physicians, physicians who want to be, not salesmen, accountants, and lawyers, but physicians. For such physicians, we offer a practice that is practically perfect, where in almost no time you experience a spectrum of cases some physicians do not encounter in a lifetime, where you work without worrying whether the patient can pay or you will be paid, and where you prescribe, not the least care, nor the most defensive care, but the best care.

If that is what you want, join the physicians who have joined the Army. Army Medicine is the perfect setting for the dedicated physician. Army Medicine provides wide-ranging opportu-

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Army Medicine offers fully accredited residencies in virtually every specialty. Army residents generally receive higher compensation and greater responsibility than do their civilian counterparts and score higher on specialty examinations.

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# Proposed Principles of Medical Ethics

*After long study and full discussion, the AMA Ad Hoc Committee on Medical Ethics has proposed a revised set of principles to be offered at the interim meeting of the House of Delegates in December.*

*The proposed revision is deliberately very general, a necessity brought on by federal actions, specifically including those of the Federal Trade Commission, directed at alleged restraints of trade by organized medicine.*

*The proposed principles would remove targets of federal suits and administrative actions, in the opinion of the Ad Hoc Committee.*

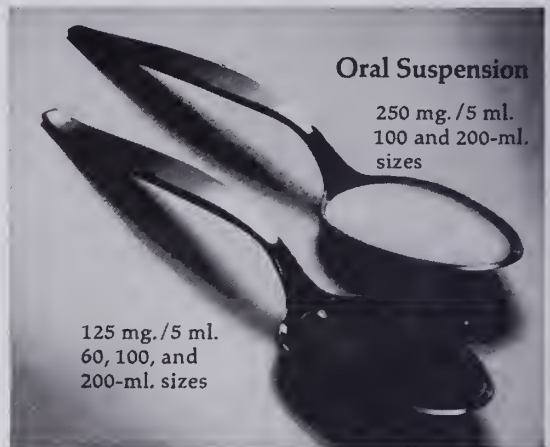
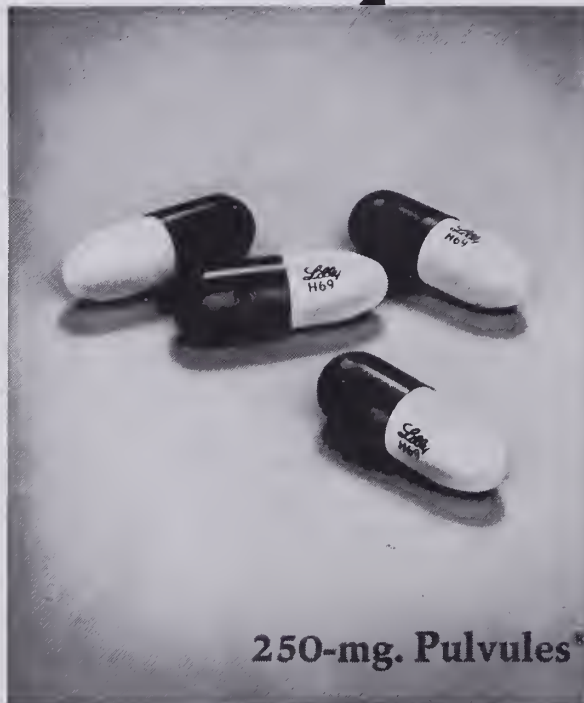
*The first Principles of Medical Ethics were enunciated by the AMA in 1847. They were revised during the 1940s and again, the last time, in 1957.*

*The proposed 1979 revision and preamble follow:*

**Preamble:** The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of those whom it serves. As a member of this profession, a physician must recognize responsibilities to society, to patients, to other health professionals and to self. The following principles adopted by the American Medical Association are not laws, but standards of conduct which define the essentials of honorable behavior for the physician.

- I. A physician shall be dedicated to providing medically competent service with compassion and respect for human dignity.
- II. A physician shall uphold the honor of the profession by dealing honestly with patients and colleagues and striving to expose those physicians deficient in character, competence, or who engage in fraud or deception.
- III. A physician shall respect the law, and also recognize a responsibility to seek changes in those requirements contrary to the best interests of the patient.
- IV. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of law.
- V. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to the public, and utilize the talents of other health professionals when indicated.
- VI. A physician, except in emergencies, shall be free to choose whom to serve, with whom to associate, and the environment in which to provide services consistent with appropriate care.
- VII. A physician, as a member of society, shall recognize a responsibility to participate in activities contributing to an improved community.

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There were greater numbers of side effects found with methyldopa than with propranolol. Some of the same effects occurred in populations. Patients on methyldopa represents 3.55% of the patient population while on propranolol represents 2.44%. (See TABLE I and II)

Both drugs control blood pressure, however side effects occur in mild to serious manifestations. Most side effects can be controlled by limiting the dose levels or by changing to another drug. The more serious effects occur depending upon the individuality of particular patients. Zacharias (1976) states that no antihypertension drug is completely free of unwanted effects. The acceptability of propranolol over a 10-year period shows that less than 10% withdrawal occurred in 14.4% of the patients. Propranolol does seem to provide smooth control of blood pressure. It may be the yardstick by which all beta-blockers are judged. The usefulness lies in its ability not to produce major problems in older patients with ear problems, and cerebro vascular damage. Also postural hypotension does not occur as much with it. It interferes to a minor degree in sexual activity and yet it combines well with other drugs, therefore, it is a good drug or choice for younger patients as well.

This study and the reviews of the literature indicates a need for further studies in clinical situa-

tions on the side effects on younger patients and on the female population.

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## An apple a day won't keep alcoholism away!

The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

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**PRIMARY CARE PHYSICIANS** wanted to locate in West Central Alabama. Rural Health Initiation program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P.O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7445, evening hours 553-2198.

**ALABAMA: Emergency Physician:** Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, AL, Emergency Department, Physicians Medical Group, P.A., P.O. Box 9639, Marina del Rey, CA 90291. Phone (213) 822-1312.

**FAMILY PRACTITIONER OR INTERNIST—ALABAMA.** Private practice opportunity with three established Physicians to share space adjacent to hospital. No weekend call. Family oriented small community close to medium sized cities. Send curriculum vitae in confidence to: Mr. William Anderson, Search Director, 4470 Chamblee Dunwoody Road, Suite 350, Atlanta, Georgia 30338.

**FOR SALE:** ADR Ultrasound Real Time Scanner, Model 2130, with all accessories including Model CM2 Camera; Electronic Calipers; Digital Freeze Frame, etc. Almost new, carries one full year warranty; reasonably priced. Contact the Woman's Clinic, P.A., Anniston, Alabama. (205) 236-4437 —Dr. Charles Brockwell; Dr. Lee Smith, or Mrs. Mary Brooks.

**GYNECOLOGIST WANTED**—for position with a women's medical facility located near New Orleans, La. Our clinic offers first trimester pregnancy terminations as well as routine gyn care. Special training is available. Remuneration—excellent. A physician wishing to establish his/her practice would find the clinic most satisfying. Send replies to: Box A, Journal of MASA, P.O. Box 1900-C, Montgomery, AL 36104.

**RELOCATABLE OR PERMANENT MEDICAL BUILDINGS** physicians offices, clinics, etc. Price ranges as low as \$15.00 to \$20.00 per sq. ft. Three to six weeks from date of order to completion of set up. Write or call King Business Services, P.O. Box 633, Haleyville, Alabama 35565 Phone (205) 486-2608.

**FAMILY PRACTITIONER (2), GENERAL PRACTITIONER (1), and GENERAL SURGEON (1)** to join either of two small groups—Mobile and Mobile area. P.O. Box 160272, Mobile 36616.

## Now there's help for the alcoholic patient.

More than ever before, physicians are facing this problem. Now, there is an answer.

After extensive research, Brookwood Health Services has developed the Alcoholism Recovery Program which is offered by Brookwood Lodges at Valley Springs, Alabama.

The program includes four phases: Detoxification and medical treatment at Brookwood Medical Center, a 28 day treatment program at Brookwood Lodge, liaison with appropriate community groups and an extensive, two year "after care" program.

This program is approved by Blue Cross and most other major health insurers. It is the only program of its kind in Alabama.

When an alcoholic patient turns to you for help, contact Dr. Jack C. Whites at Brookwood Lodge/Valley Springs, Warrior, Alabama. Phone 647-1945.



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# Sometimes it pays to be sick.

A patient with duplicate health insurance coverage can often collect more on a claim than he actually owes. This is one of the factors contributing to the rising cost of health care, because that extra money is coming out of all your patients' pockets in the form of higher and higher premiums.

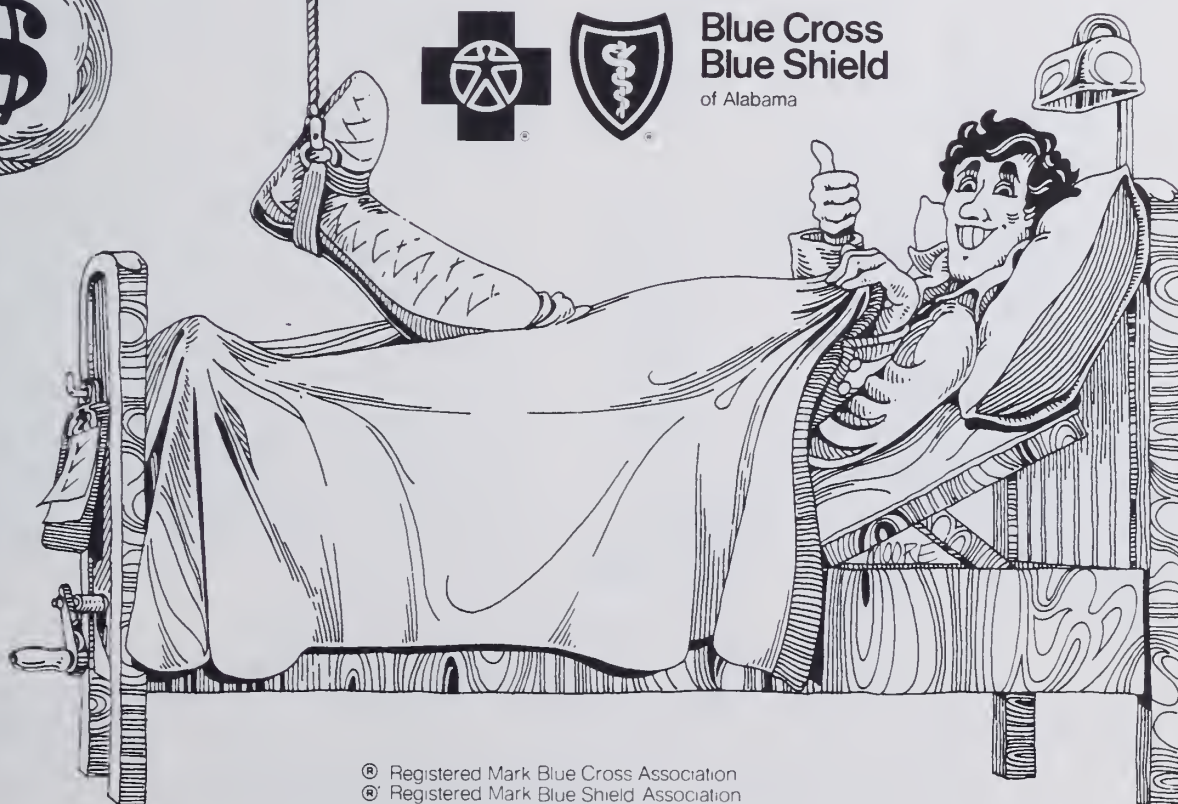
That puts you, as a doctor, and us at Blue Cross in the same boat. We need to work together to stop these duplicate payments.

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Mrs. Eugene H. Bradley  
President, A-MASA

# The Unhappy Doctor's Spouse Myth or Reality?

"When *A M News* National Affairs Editor Dennis Breo came to the AMA Auxiliary office to interview 1979-80 President Mrs. Ben Johnson Jr., we had just finished reading another in a series of recent articles on the unhappy life of the doctor's spouse.

"With a reporter's instinct to ferret out the truth, Dennis questioned Mrs. Johnson about her personal life from early to present days. It turns out that Mrs. Johnson is one *happy* doctor's wife.

"The next day, the producer of the syndicated Phil Donahue TV talk show contacted auxiliary headquarters to say that Donahue wanted to do a show on the problems of doctors' spouses, and would the auxiliary supply the audience. The guest was to be psychiatrist Philip A. Baratta Jr., MD, who created a course called "Physician's Wife—No Bed of Roses" at the University of California, San Diego.

"Since there are many, many happy and fulfilled doctors' spouses in AMA Auxiliary membership ranks, we said yes, the audience would be supplied—and further negotiated to have auxiliary member Pat Walker (Mrs. William M.) of Missouri to be on stage to tell the other side of the medical spouse story.

"The whole media blitz on unhappy doctors' wives was created when *Medical/Mrs.*, a magazine published on the East Coast, did an in-magazine survey of its stated 100,000 readers. Though only 1,000 replies were received, the story of disillusionment among doctors' spouses became the

subject of several articles in the national media—first in *The New York Times*, then in the *Chicago Tribune*, then in *Newsweek*, and many other newspapers across the country.

"We wonder if the fewer than 1,000 unhappy spouses who chose to respond to the survey truly speak for all the other thousands of doctors' spouses across the country?

"Of the published image of doctors' spouses—unhappy, lonely, betrayed—we would ask the media to show the other side of the story. We're not Polyannas about life; we know that all of us have problems; but surely a glance at the pages of *Facets* shows people dwelling not on the dark side of life—but people doing, being, and living for themselves and others."

Kathleen T. Jordan  
Editor, *Facets*

This is just another example of why we in Alabama are proud of our Ruth—Mrs. Ben Johnson, Jr. We think she does represent the physicians' spouses across our nation. The interview referred to appeared in your issue of July 13 *American Medical News*. The entire article has just appeared in the summer issue of *Facets*, our AMA Auxiliary magazine which is printed four times a year.

The magazine is all about doctors' spouses and what they are doing for others. That is what auxiliary membership and our role in life is all about—doing for others.

Annie

Pres.-Elect Mrs. O.B. Carr, Jr.; First Vice-Pres. Mrs. Rufus Lee; District Vice-Pres. NW Ralph Braund; NE—Mrs. Andrew Brown; SW—Mrs. Clifford Pringle, Jr.; SE—Mrs. William Lazenby; Rec. Sec. Mrs. Wallace Frierson; Treas. Mrs. Robert Estock.



**Before prescribing, please consult complete product information, a summary of which follows:**

The effectiveness of Valium (diazepam) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindications:** Tablets in children under 6 months of age, known hypersensitivity; acute narrow angle glaucoma. may be used in patients with open angle glaucoma who are receiving appropriate therapy

**Warnings:** As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**ORAL** Advise patients against simultaneous ingestion of alcohol and other CNS depressants

Not of value in treatment of psychotic patients, should not be employed in lieu of appropriate treatment. When using oral form adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication, abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures

**INJECTABLE** To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling, and, rarely, vascular impairment when used I.V. inject slowly, taking at least one minute for each 5 mg (1 ml) given; do not use small veins, i.e., dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest, concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea, have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status

Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals under careful surveillance because of predisposition to habituation/dependence. Not recommended for OB use

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence, can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended

**Precautions:** If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), i.e., phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

**INJECTABLE** Although promptly controlled, seizures may return; readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated

**Adverse Reactions:** Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance

**INJECTABLE** Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm, pain in throat or chest have been reported

**Management of Overdosage:** Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure, employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value

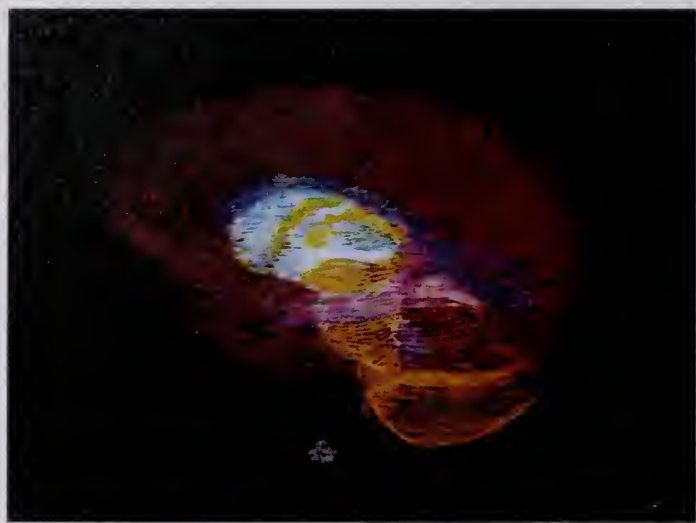
**Supplied:** Tablets, 2 mg, 5 mg and 10 mg, bottles of 100 and 500. Tel-E-Dose® (unit dose) packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10. Prescription Paks of 50, available singly and in trays of 10. Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1. Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative

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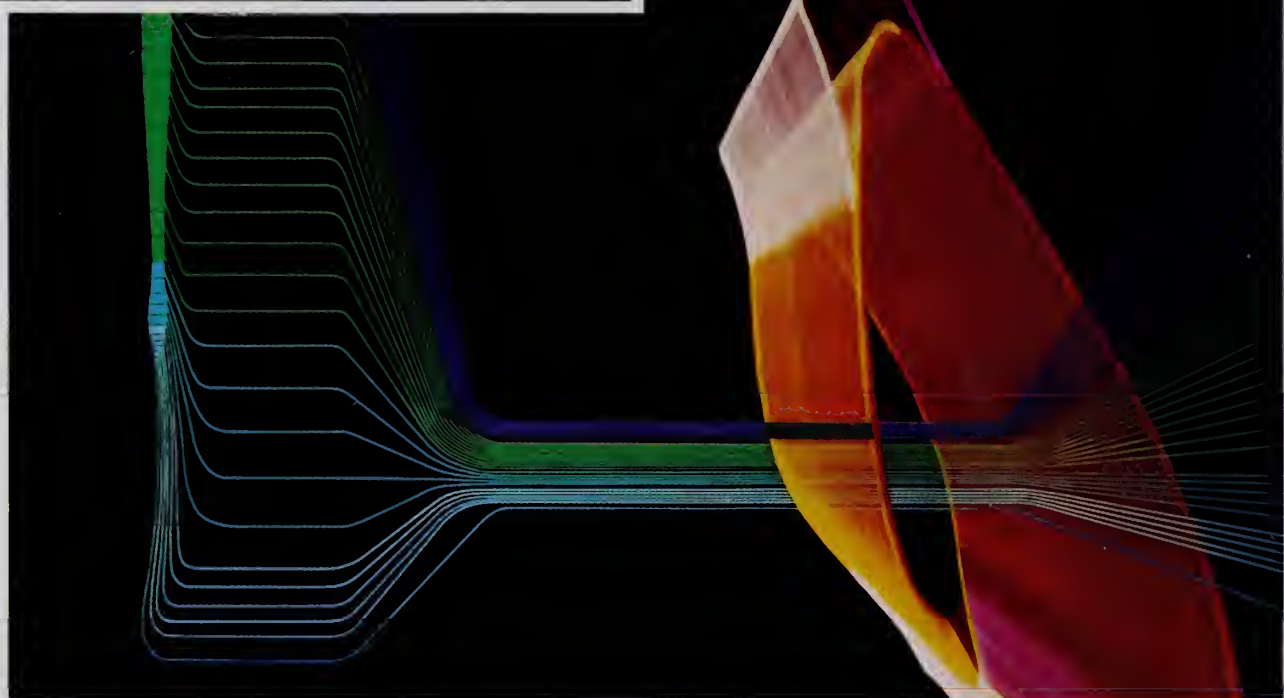
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# JOURNAL

of the Medical Association of the State of Alabama

NOVEMBER, 1979

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## Leadership Conference Set for January

Page 3

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# A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own.

Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

## Valium®<sup>®</sup> diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets  
a prudent choice in psychic  
tension and anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d., alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.



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**Style:** The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

**Copy Changes:** When an author receives a galley proof back from MASA, he is expected to make corrections only. Copy changes, alterations on proof from the original manuscript, are expensive. Please try to say what you mean in the original.

**Length of Articles:** Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

**Illustrations:** Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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## From the Executive Director

### Straight Talk

In addition to the regular subscribers to the *Journal*, a complimentary copy of this issue is being mailed to interns and residents in the state, men and women who are not yet members of the Association.

One of the purposes of this, of course, is to encourage them to participate in organized medicine at state and national levels. See the centerfold insert, "THE AMA . . . WORKING FOR YOU."

I could go on endlessly about the many advantages of membership in your county, state and national medical organizations, but I'd like to turn that job over to James H. Sammons, M.D., Executive Vice President of AMA.

Back in March, Dr. Sammons addressed the Council of the Medical Society of the State of New York, angrily deploring the fact that so many New York doctors (about half) had never bothered to join their state or national medical organizations. He wondered why.

Further, he wondered why almost half of the 300,000 physicians in active practice in this country had not joined the AMA. Dr. Sammons said he was tired of pulling his punches:

"It offends me that half of the physician population of this country is getting a free ride."

The AMA, like MASA, represents *all* physicians, members and non-members alike, because the public and private interests of medicine make no distinction.

What Dr. Sammons had to say applies, of course, to state as well as national organized medicine:

"60,000 doctors in this country belong to state and county medical societies, but do not belong to the AMA. 150,000 doctors don't belong to anything. . . .

"We can't survive under that arrangement very much longer. The cost of doing business today and the protection of the public is much too high for that kind of attitude."

There are many weeks when AMA officers commute between Chicago and Washington, there to reinforce the full-time lobbying staff that represents American medicine the year-round.

Non-members don't seem to care, Dr. Sammons said, that "the legions of people who would like to take over this profession are not decreasing in size. They are getting more sophisticated in their proposals for doing it. . . .

"We are fighting with the Federal Trade Commission on three different fronts over your rights to

Continued on page 4





Luther L. Hill, M.D.  
President

# Leadership Conference

It is universally recognized today that we are living through an era of great change in health care.

Tremendous progress is being made in treating individual diseases, but we can only say that tremendous changes are being made in health care delivery.

Only the future will tell whether the delivery changes will be beneficial or detrimental. They are experiments. In general, these changes are being sponsored by honest, idealistic, socially motivated individuals who are trying to help their fellowman. There are, of course, some buck conscious workers, but then we have money mad physicians in our profession.

If there are to be changes (and I am sure there will be), it is most important that we physicians should help guide these changes. We are the most important ones involved in the delivery of health care.

It is not sufficient for a physician just to be a member of the medical society or specialty group—direct, personal involvement is a necessity.

MASA is organizing a Leadership Conference in January of 1980 for the purpose of looking at and evaluating the changes that are occurring. We think it most important for the leaders and future leaders of our profession to attend. All members of

The Medical Association are invited, but the Presidents and President-elects of all county societies, members of the county boards of censors (or trustees), all Presidents and President-elects of specialty groups, all AMA Delegates and Alternate Delegates, all MASA Delegates, MASA Counsellors and all of our Council members are urged to attend and participate in the discussion.

The same areas addressed at the Annual Session three months later will not be considered. The meeting will not be an orientation course for new members. It will be designed for those who are running and will run the show.

Dr. James H. Sammons, the AMA Executive Vice-President, will be present to discuss some of the problem areas on the national level.

Health, Education and Welfare directives, Federal Trade Commission injunctions, Health Maintenance Organizations, Independent Practice Associations, HSA's, MSA, SHPDA, and PSRO are all important to know about. Also, how did we get this way and where are we going? What can we do?

The time is late. We'd better find out about these things and do something about solving some problems.

The Program will be published in *The Alabama M.D.* soon.

*Luther Hill*

practice medicine as we know it and think best. . . .

"These are very serious problems, and I don't believe they will go away between now and this time next week, next month, or next year, and maybe never. The FTC hired 186 newly graduated lawyers last year for the sole purpose of pursuing medicine and law in all its forms as targets of the Federal Trade Commission. . . ."

Then there's Congress and the State Legislatures, where new schemes are offered that would destroy or dilute the quality of the finest medical care in the world. Fighting all this in the United States costs millions.

The time has long since passed, Dr. Sammons said, when the doctor who didn't want to be bothered could say, "Let George do it."

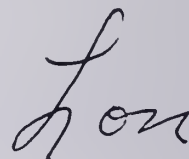
That luxury could be fatal in the future, Dr. Sammons said: "We will lose by default, because we simply cannot build a big enough base to continue to carry the load."

Dr. Sammons said he was tired of working for physicians who refuse to pay their share and contribute their share the task, which was never more

awesome. Half of them, he said quite bluntly, are free-loaders, who withhold not only their dues but their thoughts, ideas, moral support—all those things that go into the far more completely organized *enemies* of medicine.

Think about it. Your county society, MASA and the AMA can do much for you. But you owe all these organizations something too—the chance for survival. Moreover, you owe that to those who preceded you and those who will follow you.

*[Application for membership in the MASA and the AMA is made through the local county medical society. The name and address of the secretary of the county medical society may be obtained by writing to MASA, P.O. Box 1900-C, Montgomery, AL 36104, or telephone toll free 1-800-392-5668. Membership in organized medicine is vital.]*



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nities for the student, the resident, and the practicing physician alike.

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# What's an apha?

**a-pha'gi-a** (ə-fā'jē-ā), *n.* [NL, fr. a + *phagēin* to eat.] *Med.* Inability to swallow.

**A-pha'ia** (ə-fā'vā, f'ā), *n.* [Gr.] *Gr. Myth.* A goddess worshipped in Aegina and Crete, identified with Demeter and Persephone.

**a-pha'kia** (ə-fā'kē-ā), *n.* [NL, fr. a + *nāx* Gr. *phakē* seed of a lentil.] *Med.* Abscess of the cornea, usually of the eye, or the abnormal state of refraction resulting therefrom, as after operation for cataract. — **a-pha'ki-al** (ə-fā'kē-ā), **a-pha'k'ic** (ə-fā'kē-ā), *adj.*

**Aph'a-nap'ter'yx** (ə-fā-nāp'ter'ik-s), *n.* [NL, fr. Gr. *aphanē* obscure + *ptērōn* wing.] *Zool.* A genus of nocturnal birds of a large, long-billed family, capable of extraordinary M. urinus. It was exterminated by man in recent times.

**Aph'a-nes** (ə-fā-nēs), *n.* [NL, fr. Gr. *aphanēs* unapparent.] *Bot.* A genus of 20 species of herbs of the ruscaceae (Ruscaceae), natives of the north temperate zone. They are inconspicuous, and have thick, fleshy, rounded and small apetalous flowers.

**a-phan'e-site** (ə-fā-nē-sīt), *n.* the minute

**aph'a-nite** (ə-fā-nīt), *n.* dark rock

**— a-phan'iti** (ə-fā-nītē), *adj.* invisible to

**aph'a-no-** (ə-fā-nō-), *adj.* some, invisible

**Aph'a-no-my'** (ə-fā-nō-mē), *n.* as in *aphanomyces*

**Aph'a-no-my'** (ə-fā-nō-mē), *n.* as in *aphanomyces*

**a-phan'ophy** (ə-fā-nōfē), *n.* aphanitic green mass

**A-phar'idae** (ə-fā-rē-dē), *n. pl.* [L, fr. Gr. *Apharades*] *Gr. Myth.* Sons of Aphrodite. See *lo*.

**a-pha'sia** (ə-fā-zhē-ā; -ā-ā), *n.* [NL, fr. *aphasia*, fr. *aphas* not spoken for + *not* + *phōnē* to speak.] Loss or impairment of the power to use or understand speech resulting from brain lesion, or, sometimes, from functional or emotional disturbance. The chief kinds recognized are **auditory** or **sensory aphasia**, the inability to hear and understand heard speech though in the mother tongue; **jargon aphasia**, the marked tendency, in spite of fluency, to use words that bear no relation to the meaning intended; **motor**, or **Broca's aphasia**, the inability to speak and to organize the movements of speaking; **conduction**, that exists without actual paralysis of the speech organs; **nominal aphasia**, the loss of power to use or understand individual words; **semantic aphasia**, the loss of power to use or understand phrases and connected discourse as a whole; **syntactical aphasia**, the loss of power to use the proper ending and sentence formation of common speech; **verbal aphasia**, loss of power to form words, rarely or affected.

**aph'isi-ac** (-zē-āk), *adj.* Aphasical — *n.* A person suffering from aphasia.

**a-pha'sic** (-zēk; -sēk), *adj.* Of pertaining to, or affected by aphasia; speechless. — *n.* An aphasiac.

**APHAT** *n.* *Med.* Acronym, Alabama Professionals Health Assurance Trust. 1. *Colloq.*, So. U.S., best deal in health coverage for physicians, assistants, families. 2. Nonpareil, peerless. 3. Full coverage, diversified plans, best rates, matchless efficiency. 4. *Syn.*, also *colloq.*, bonanza, pronto, etc. 5. *v.t.* and *v.i.*, to insure with APHAT, as in "I've decided to apha my office."

**Aph'e-lan'dra** (ā-fē-lān'drā), *n.* [NL, fr. Gr. *apheles* simple + *anēr*, *andros*, man; — so called from the once-called antlers.] *Bot.* A large genus of tropical American plants of the acanthus family (Acanthaceae). They have quadrangular spikes of handsome red 2-lipped flowers.

**Aph'e-len'chus** (ā-fē-lēn'chus), *n.* [NL, fr. Gr. *apheles* simple + *enēchē* spear.] *Zool.* A genus of nematode worms in which the esophagus is firmly enmeshed, and the male lack a bursa. They are parasitic to plants, and often very numerous.

**a-pha'li-an** (ə-fā-lē-ān), *adj.* Of or pert. to the aphelion. **Aph'e-li'nos** (ā-fē-lē-nōs), *n.* [NL, fr. Gr. *apheles* smooth, plain, fr. a + *phē* — *phēlēō* to ground.] *Zool.* A genus of small chalcid wasps, parasites of plant lice and scale insects.

**a-pha'li-o-trop'ic** (ə-fā-lē-ō-trop'ik), *adj.* Characterized by apheliotropism. — **a-pha'li-o-trop'i-cal-ly** (ā-fē-lē-ō-trop'ik-ā-lē), *adv.*

**a-pha'li-o'tro'pism** (ā-fē-lē-ō-tro'piz-m), *n.* [See *APHOTROPISM*.] *Plant Physiol.* Negative heliotropism, as in certain roots which turn away from the sun.

**Aph'e-ros** (ā-fē-rōs), *n.* [NL, fr. Gr. *aphele* smooth + *phē* to reach.] *Botan.* A genus of 10 or 12 species of very robust bulbs with very short legs, found in the Andes and Páramos of America.

*fr. phēmē*  
**a-phē'm'ic**

*type (sing'lo-cope)* **A**

*scope.*  
**phē'm'ic** to

*antiq* **The**

*a phonic*  
**phē'm'ic**

*phē'm'ic*

*Orf. E. D.*

**aph'e-ta** (ā-fē-tā), *n.* [L, the praefect who start a chariot race; fr. Gr. *apheleō* to start off a military engine, also an astrologia term for certain heavenly bodies.] *Astrol.* The ruler or governor of the nativity.

**a-phē't'ic** (ā-fē-t'ik), *adj.* [Gr. *aphēleō* letting go.] Pertaining to or resulting from, aphectic, by extension, from aphresis. — **a-phē't'ic-al-ly**, *adv.*

**aph'e-tism** (ā-fē-tizm), *n.* A word altered by aphaesis.

**aph'e-tize** (tīz), *v.t.* To shorten by aphaesis.

**-a-ph'i-a** (-fē-ā), *n.* [NL] *Med.* A combining form from Greek *aphē*, reaching touch, denoting a specified condition of the sense of touch, as in *amblyaphia*, *oxyaphia*.

**a'phid** (ā-fīd), *n.* [L. *APHIS*.] *Zool.* A plant louse; any of numerous small hemipterous insects of the family Aphididae. They are small insects that suck the juices of plants, and are a constant pest to gardeners.



**Aph.** (*Aphis mali*), much enlarged *a* Winged adult male; *b* Wingless viviparous female.

often do great damage. In addition to the sometimes winged males, and the usually wingless females which appear in the autumn and produce fertilized eggs, there are females, also usually wingless, capable of producing living young further asexually for many generations in rapid succession, thus forming the large colonies often seen on plants. Many species secrete from the alimentary canal a sweet fluid called *honeydew*, of which ants are very fond. Ants are protected on by this and many insects resp by the larvae of the ladybugs. Among the most injurious aphids are the rapine *phloxera* (*Phloxera* *astatrax*) and the woolly *aphid* (*Ericoma lanigerum*). Cf *APHIS*. — **a-phid'i-an** (ā-fīd'ē-ān), *adj.* & *n.* — **a-phid'i-ous** (-ūs), *adj.* — **a-phid'id** (ā-fīd'id), *n.*

Questions defining your needs? Call APHAT's Bill Wykoff or Joyce Thompson. They know the subject from aardvark to zymurgy (and maybe even Zyzzygeton). Toll free, 1-800-272-6401; in Birmingham, 933-7280.

# CME at USA

College of Medicine

by Samuel Eichold, M.D.

*"To practice good medicine, a physician should attend good meetings and read good journals."*

Once, not too long ago, practitioners embraced this injunction as sound and sufficient counsel for keeping abreast in a changing world. But in recent years, a government increasingly involved in the delivery of health care began to exact tribute for the fees which physicians were granted for their services.

This tribute has taken different forms, for instance a gradual eroding of the physician's rights and

privileges. Then there was foisted upon a largely unsuspecting profession a nostrum called Continuing Medical Education (CME). A beguiling term except that this program was compulsory, a requisite for recertification and credibility for membership in medical societies or relicensure. CME would require of the physician hours of attendance in a so-called "learning environment."

The fallacious assumption is that Continuing Medical Education will assure quality in the delivery of health care, ignoring the fact that quality is the product of the individual practitioner.

The fetishism surrounding CME obscures the true reality: we have had continuing medical education since Guttenburg.

The above sentiments may sound strange coming from a person who is the Director of Continuing Medical Education at the University of South Alabama College of Medicine, Mobile, Ala.

The many expenses involved in organizing and conducting a CME conference require the charging of a fee. While the original intention was just to cover expenses, some conferences recorded substantial profits, and the proliferating CME arena was invaded by private venture, with similar involvement of educational institutions and health care facilities. This development has brought us to the brink of excess and could portend a degrading of the quality of educational gatherings.

Although the Office of CME at the University of South Alabama recognized that education can be achieved through the type of CME conference that is commonly organized, it was decided to examine alternative possibilities. Electing not to completely discard the conventional type conference, it chose, nevertheless, to consider new approaches that offered promise.

We decided on four courses: (1) to offer education to physicians in their own community hospitals; (2) to give physicians personnel access to the sophisticated facilities and the human resources available at the University of South Alabama Medical Center; (3) to establish toll-free

telephone communication to the University hospital from within Alabama and from adjacent states; and (4) to utilize the work-plus-vacation type conference which is increasingly popular among physicians and other groups.

## Home Ground

By transporting teaching resources from the University to the physician's home ground, we are assured of a larger proportion of practitioners than with an elaborate program held in unfamiliar surroundings. Primary care physicians in outlying areas frequently have no replacement and can ill afford to spend an extended period of time away from their practice, but they can participate in CME activities in their own hospital. Where there is no backup and where years of self teaching have been the sole means of learning, there is little inducement to temporarily abandon a practice however attractive the learning opportunity may be.

When CME is arranged at a local community hospital, it is our experience that attendance is seldom below 85% of the physician population. By focusing subject matter on local problems, interest is heightened. An additional gain is that the local physician in a familiar environment can devote all his energies to new learning without having to adjust also to a new environment.

Contractual arrangements have been made with community hospitals. This affords a reasonable means of sustaining credibility for a Committee for Hospital Accreditation. It also facilitates meeting the CME needs of the practicing physician. Along with the CME Programs for the physicians there are parallel learning experiences arranged for the hospital's paramedical staff. When physicians are exposed to learning opportunities in a specific area, such as infectious diseases, it is equally important for the paramedical personnel to learn about contamination, spread of infection within hospitals, and means of prevention.

Our second means of making CME available to the practicing



physician in city and country alike, is the distribution of a printed brochure, *Scheduled Teaching Programs*, that lists ongoing CME-accredited courses at the University of South Alabama College of Medicine. These "on tap" opportunities for enhancement of knowledge and skills are the didactic teachings and bedside rounds at a *University Hospital*.

They are available any day of the week and are free. The printed brochure serves as a reminder to physicians of an advantageous way to put to use a day off from the office—especially if predicted bad weather means foregoing usual leisure pursuits.

Private physicians are welcome, too, at activities for students and house staff. Often there are classes which are frequently arranged as review sessions for house staff who are planning for Boards and they provide insight into areas that are being currently studied. All these are basic learning experiences.

The physician in isolated areas encounters a panorama of problems, for some of which he can find no ready answer. He may have no colleagues with whom he can consult about perplexities, and he has no readily available local reference source at his disposition. In order to provide physicians in such a situation with prompt and convenient access to needed information with which to solve problems, our University has provided a third educational pathway—a toll-free 24-hour telephone system called Current Medical Expertise (CME again).

Through the hospital switchboard he can reach a specific faculty member or members who are assigned to this duty by rotation. The service has become widely used and affords, furthermore, a dialog between two or more physicians that may become a sustaining one.

Questions of all kinds reach the University faculty members, including requests for information about patients referred by distant doctors for out-patient or in-house medical care. As an instrument of CME, there is no question of the success and cost effectiveness of the Current Medical Expertise line.

(The toll-free number for calls within Alabama is 1-800-672-6781, and for calls from adjacent states is 1-800-633-6886.)

## Work and Travel

There are still advantages for some to combine a trip or vacation with a learning experience. We think of this as a fourth approach to CME. It is possibly less cost effective than the before mentioned educational opportunities and more maligned as a CME activity. I am referring to the one, two, or three-day seminar that is held in the University environment or some romantic and alluring vacation spot.

One can readily imagine why identical programs instituted in New Orleans or Palm Springs would be better attended than in Mobile. Our faculty benefits from exposure to the critical eyes of the practicing physician and by displaying their special abilities. Departments seek participation of leaders in their particular field to join with our resident faculty for expounding of learning in programmed education.

The faculty at the University of South Alabama will continue to so perform in CME where good quality of learning may be afforded the physician. No effort is made to follow a pattern of Department development of programs, for to do so would result in quantity programs not related to physician needs and might efface quality of education.

The primary function of a College of Medicine remains the selection and training of undergraduate students as Doctors of Medicine. Hand-in-hand with this is an additional responsibility to provide postgraduate medical training. To an environment of learning that is quality oriented—the class room, the lecture hall, the hospital patient's room, the laboratory, come those wishing to learn, including members of the medical profession who are in private practice in city or country.

Within the walls of any University Medical Center and its adjacent facilities where teaching programs are being conducted there are daily opportunities for the practicing physician to select what he wants to

hear or observe to meet his particular needs.

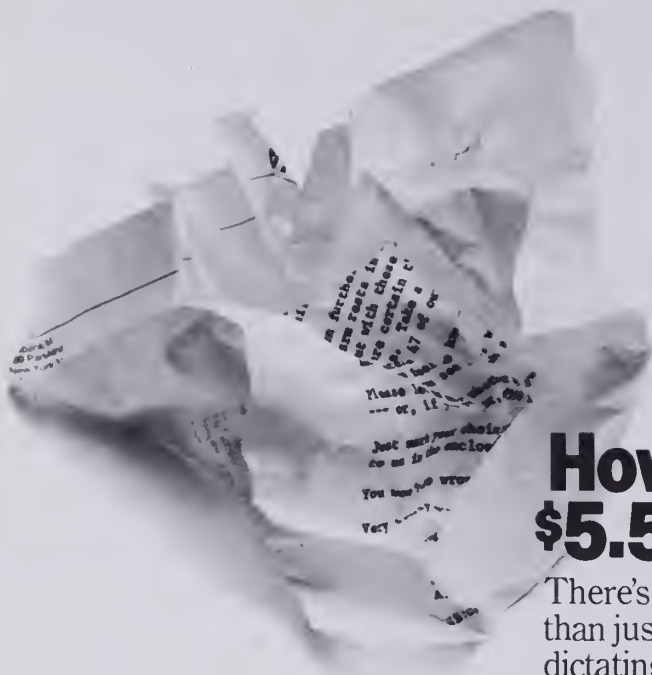
The pace of the medical academic world today is no longer leisurely (except by comparison with the professional and business world). Yet it does have the means to pursue special research studies and investigations that are not possible for the average private practitioner.

The medical academic world is innovative, dynamic, progressive, adaptive to change. It is incumbent upon the University and CME to share this world with its alumni. Thus, we have established a Medical Alumni Affairs Office in conjunction with the CME office to fulfill our obligation to over 500 alumni from the College of Medicine, including the house staff from the old City Hospital and the more recent Mobile General which evolved into the University of South Alabama Medical Center. We sustain an ongoing line of communication to physicians, who are assured of our concern for their ability to maintain and expand their knowledge and skill, as well as our support in matters of licensure and membership in medical societies. And always we seek to encourage them to utilize our facilities and ongoing activities for their continuing medical education.

## Different Approaches

There is rather universal acceptance of the concept that different people learn in different ways. There have been various approaches to develop and promote means of involving physicians in effective CME. The effort has been made at the University of South Alabama to adapt those learning opportunities to limiting factors which include not only sparcity of Physician's time but the limitations of faculty resources at the University of South Alabama College of Medicine and funds that can be made available for teaching that is not to the undergraduate.

We feel that from careful selection of alternatives we have developed the most practical and effective learning opportunities. We are constantly seeking to make appropriate changes, and we welcome suggestions from the profession.



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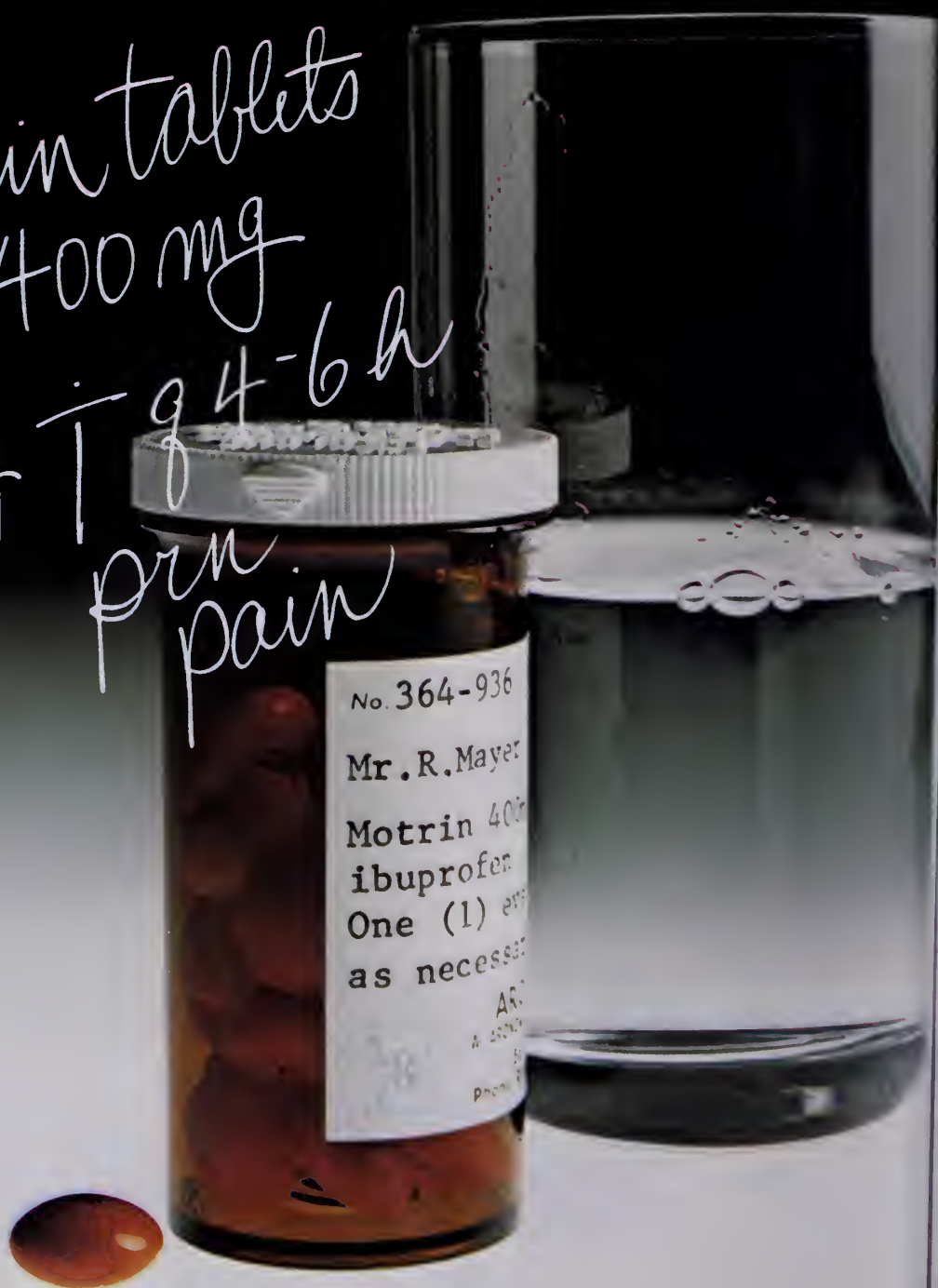


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prn  
pain





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Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
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Statistical significance		p<0.02	p<0.01	p<0.05	p<0.02	p<0.002

\*0 = No relief    1 = Partial relief    2 = Complete relief    Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

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mild to moderate pain

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**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels. **Coumarin:** Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

#### Adverse Reactions

##### *Incidence greater than 1%*

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,\* epigastric pain,\* heartburn,\* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,\* headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

\*Incidence 3% to 9%.

##### *Incidence less than 1 in 100*

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

##### *Causal relationship unknown*

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

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# Burn Care

## *Impact of Regionalization in Region Two - 1978*

By Phillip K. Bobo, M.D.

### INTRODUCTION

The West Alabama EMS System was initiated in Region Two in the State of Alabama in July, 1975. The region (see Figure 1) encompasses seven counties covering 5,384 square miles and has a population of 215,000. Prior to initiation of the system, limited implementation of training, ambulance placement, and an emergency hospital-to-hospital and hospital-to-ambulance VHF radio communications system had been developed utilizing local resources, National Highway and Traffic Safety and State Revenue Sharing funding. With the initiation of the Department of Health, Education and Welfare (DHEW) EMS Systems concept, a comprehensive 15 component basic life support/advanced life support systems approach was initiated. Special emphasis on categorization of facilities for critical burn patients was initiated in 1975. This included categorization according to the College of Surgeons and the American Burn Association Optimal Criteria, areawide planning and specific programmatic initiatives to identify and selectively triage burn injuries from the local community hospitals to the designated regional trauma center at Druid City Hospital in Tuscaloosa in the case of moderate burns and to the burn center which is located outside the region, 60 miles from the regional hospital, at the University of Alabama Hospitals Complex in Birmingham. A schematic conceptualization of the facilities orientation and triage is shown in Figure 2. The program experience during the years 1975 to 1978, with the selective identification, field treatment and successive triage to definitive care, the regional distribution and outcome is the object of this report.

### METHODS AND MATERIALS

A recent landmark development of the American Burn Association was the adoption of "Specific Optimal Criteria For Hospital Resources for Care of Burn Patients" in March, 1976. These criteria specify four treatment settings and are listed below:

1. Hospital with in-depth expertise and optimum facilities for burn care (burn unit, burn center). Capability for delivering all therapy required including rehabilitation, plus teaching, training of personnel and burn research.
2. Hospital with special expertise in burn care (burn program). Minor burn care, emergency care, referral of larger burns and complete care of burns of moderate severity, including rehabilitation.
3. Hospital Emergency Department—for minor burn treatment, emergency care of large burns, and appropriate referral.
4. Emergency care at the site of the accident and transportation.

Given the treatment settings listed above, three categories of severity of burn injury can be identified: (1) Major (2) Moderate, and (3) Minor.

- A. *Major Burn Injury*—(Second degree burns of greater than 25% of the body surface area in adults, 20% in children), all third degree burns of 10% of body surface area or greater, all burns involving hands, face, eyes, ears, feet, perineum, all inhalation injury, electrical burns, and complicated burn injury involving fractures, or other major trauma, and all poor risk patients. Such patients would normally enter the system at the

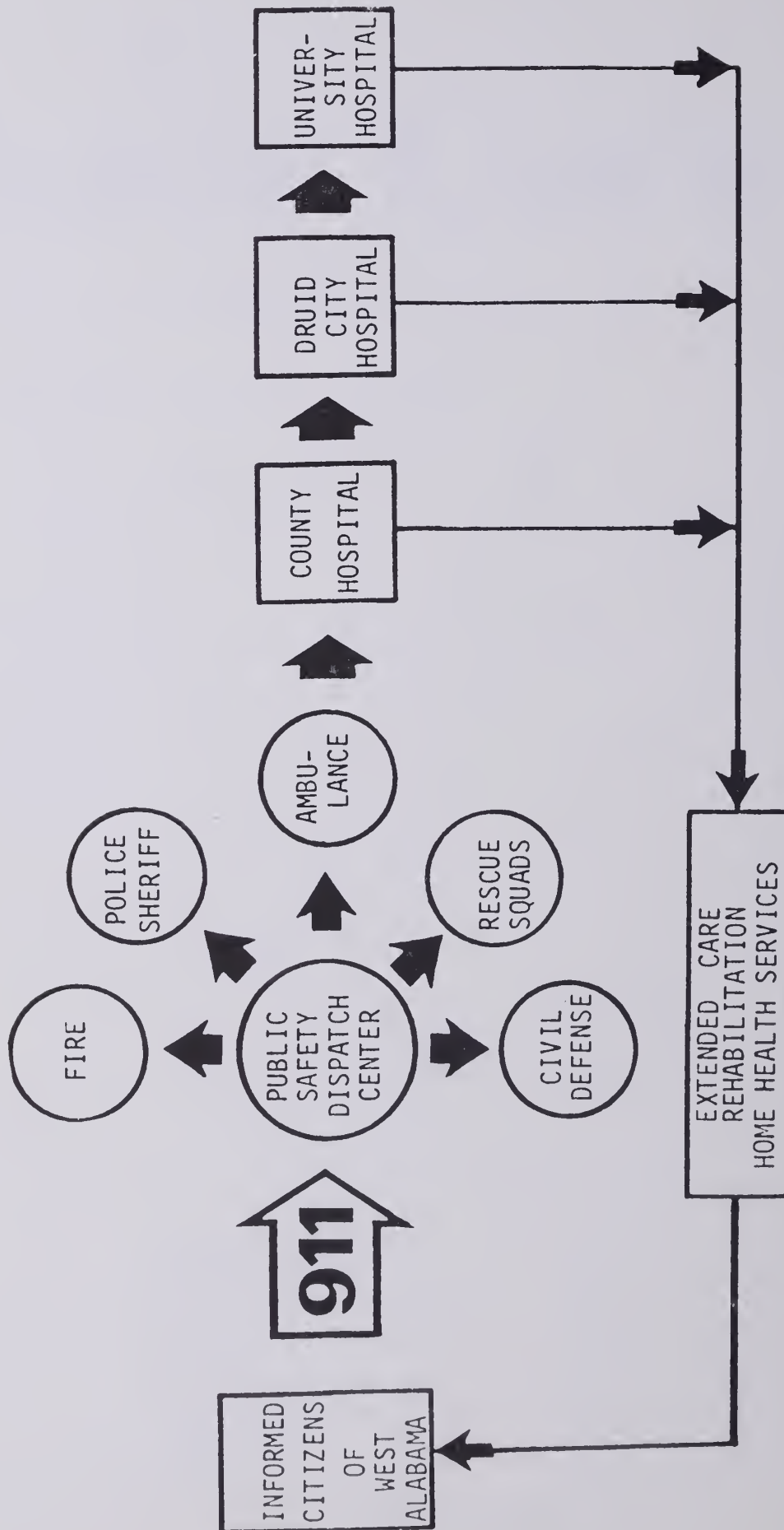


**ALABAMA**

Total square miles in Region 2: 5,380  
Total Region 2 Population: 223,700

\*UAB Burn Center

FIGURE 2  
Conceptual Model of Public Access

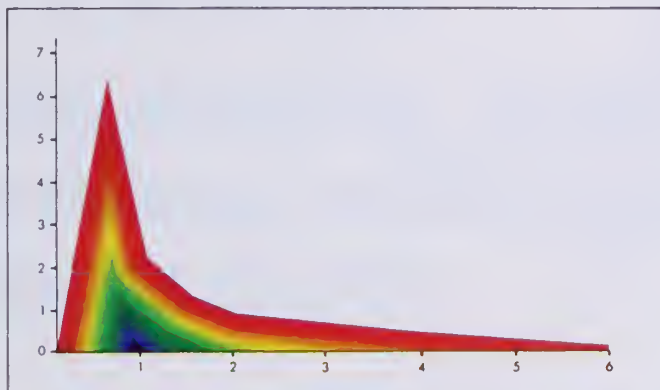


The University Hospitals System in Birmingham include the Burn and Spinal Cord Injury Center and is located 60 miles from the regional hospital at Tuscaloosa.

Continued on page 35



more  
than just spectrum

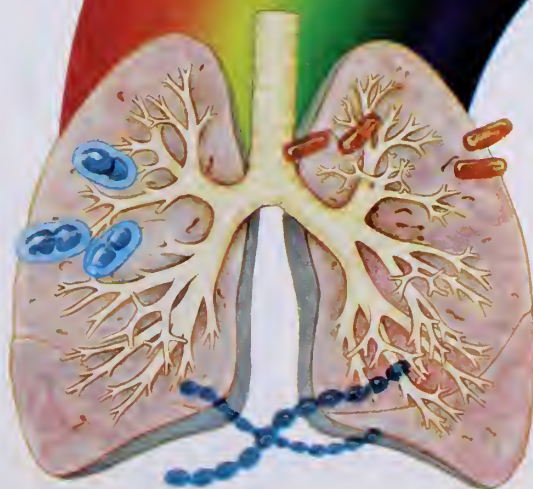


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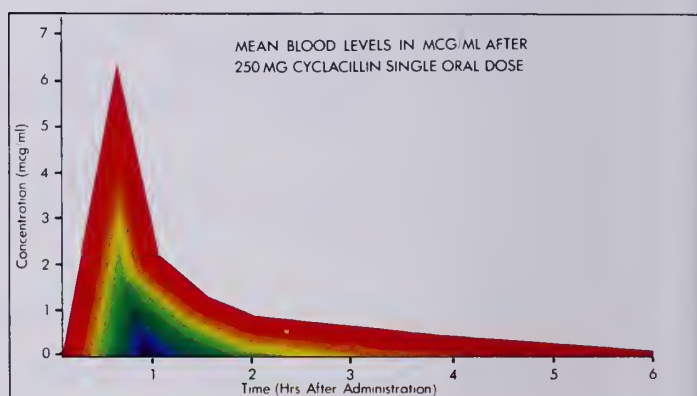
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(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



### High cure rate with CYCLAPEN<sup>®</sup>

Causative Organism	Bronchitis/Pneumonia <sup>†</sup>	No. of Patients
<i>S. pneumoniae</i>	100	73
	95	
Chronic Bronchitis <sup>†</sup> (acute exacerbation)		
<i>H. influenzae</i>	92	12
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>	
Streptococcal Sore Throat <sup>†</sup>		
Group A beta-hemolytic Streptococcus	100	44
	86	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

## more than just spectrum in bronchitis, pneumonia and upper respiratory tract infections<sup>†</sup>

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.

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# effects than double-blind patients\*



Fewer side effects with CYCLAPEN® in  
double-blind studies to date<sup>1,2</sup>

Total number of drug-related side effects in all patients	
CYCLAPEN®	128 of 1,286 (10%) of patients
ampicillin	202 of 1,129 (18%) of patients
Difference statistically significant ( $P < 0.001$ )	

CYCLAPEN® (cyclacillin)

Effective for bronchitis, pneumonia,  
and upper respiratory tract infections†

- Excellent clinical results in bronchitis,  
pneumonia and upper respiratory tract  
infections
- Significantly lower incidence of diarrhea  
and skin rash

1. Gold JA, Hegarty CP, Deitch MW, Walker BR:  
Double-blind clinical trials of oral cyclacillin  
and ampicillin, *Antimicrob Ag Chemother*  
15:55-58, (Jan.) 1979.

2. Data on file, Wyeth Laboratories.

## more than just spectrum in otitis media

Clinical efficacy of CYCLAPEN® in otitis media†

Causative Organism		No. of Patients
<i>S. pneumoniae</i>	96	82
	95	
<i>H. influenzae</i>	88	96
	85	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

# more than just spectrum CYCLAPEN® (cyclacillin)

Tablets/  
Suspension

**Wyeth Laboratories**  
Philadelphia, Pa 19101

See important information on next page)

New from Wyeth Laboratories

# CYCLAPEN<sup>®</sup>

(cyclacillin) Tablets/  
Suspension

**more than just spectrum in bronchitis,  
pneumonia, upper respiratory tract  
infections and otitis media\***

- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes
- Exceptionally high peak blood levels—3 times greater than ampicillin (clinical efficacy may not always correlate with blood levels)
- Rapidly excreted unchanged in the urine—1½ times faster than ampicillin
- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date
- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients
- New CYCLAPEN<sup>®</sup> Suspension—great-tasting raspberry punch flavor

\*Due to susceptible organisms.

## How Supplied

CYCLAPEN<sup>®</sup> (cyclacillin) tablets:

250 mg scored tablets  
500 mg scored tablets

### Indications

Cyclapen<sup>®</sup> (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below.

Cyclapen<sup>®</sup> is indicated for the treatment of the following infections:

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci  
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)

Otitis Media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*

Acute exacerbation of chronic bronchitis caused by *H. influenzae*\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis* (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections.)

NOTE: Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing.

### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins.

### Warnings

CYCLACILLIN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT.

CYCLACILLIN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS.

SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN.

ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN.

BEFORE THERAPY WITH A PENICILLIN, CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED.

PRECAUTIONS  
Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken.

PREGNANCY: Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman.

### Adverse Reactions

The oral administration of cyclacillin is generally well tolerated. As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

hypersensitivity to penicillins or in those with a history of allergy, asthma, hay fever, or urticaria.

The following adverse reactions have been reported with the use of cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS)

Other less frequent adverse reactions which may occur and that have been reported during therapy with other penicillins are: anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

### Dosage and Administration

INFECTION\* ADULTS CHILDREN  
Dosage should not result in a dose higher than that for adults.

Respiratory Tract Infections\*\* 250 mg q.i.d. in equally spaced doses body weight <20 kg (44 lbs) 125 mg q.i.d. in equally spaced doses

Tonsillitis and Pharyngitis\*\* 500 mg q.i.d. in equally spaced doses body weight >20 kg (44 lbs) 250 mg q.i.d. in equally spaced doses

Bronchitis and Pneumonia 250 mg q.i.d. in equally spaced doses 50 mg/kg/day q.i.d. in equally spaced doses

Mild or Moderate Infections 500 mg q.i.d. in equally spaced doses 100 mg/kg/day q.i.d. in equally spaced doses

Chronic Infections 250 mg to 500 mg q.i.d. in equally spaced doses depending on severity 50 to 100 mg/kg/day in equally spaced doses depending on severity

Otitis Media 250 mg to 500 mg q.i.d. in equally spaced doses depending on severity 50 to 100 mg/kg/day in equally spaced doses depending on severity

Skin & Skin Structures 500 mg q.i.d. in equally spaced doses 100 mg/kg/day in equally spaced doses

Urinary Tract 500 mg q.i.d. in equally spaced doses 100 mg/kg/day in equally spaced doses

\*As with antibiotic therapy generally, treatment should be continued for a minimum of 48 to 72 hours after the patient becomes asymptomatic or until evidence of bacterial eradication has been obtained.

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum 10 days of treatment is recommended to guard against the risk of rheumat fever or glomerulonephritis.

In the treatment of chronic urinary tract infection, frequent bacteriologic or clinical appraisal is necessary during therapy and may be required for several months afterwards.

Persistent infection may require treatment for several weeks. Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure  
Based on a dosage of 500 mg q.i.d. the following adjustment in dosage interval is recommended:

Patients with a creatinine clearance of <50 ml/min need no dosage interval adjustment.

Patients with a creatinine clearance of 30-50 ml/min should receive full doses every 12 hours.

Patients with a creatinine clearance of between 15-30 ml/min should receive full doses every 18 hours.

Patients with a creatinine clearance of between 10-15 ml/min should receive full doses every 24 hours.

In patients with a creatinine clearance of <10 ml/min serum creatinine values of >10 mg % serum cyclacillin levels are recommended to determine both subsequent dosage and frequency.

Wyeth Laboratories  
Philadelphia, Pa 19101





# Pneumonic Sarcoidosis

by

Myung Soo Shin, M.D.<sup>(1)</sup>

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## ABSTRACT

Four cases of pulmonary sarcoidosis manifesting a pneumonic appearance on chest roentgenogram are reported with pathologic correlation. The purpose of this paper is to emphasize this unusual manifestation of sarcoidosis, and the fact that transbronchial biopsy proved to be an effective method in diagnosis of this disease entity.

## Case No. 1

A 23-year-old black male presented with a vague history of malaise, easy fatigability, low-grade fever, episodic left anterior chest pain, and fifty-pound weight loss. Physical examination revealed dry rales, and a palpable spleen tip. Laboratory data included a hypochromic microcytic anemia, an elevated lactic dehydrogenase, and negative rheumatologic screen. Multiple cultures of sputum and culture of lung tissue were negative for fungi and acid-fast bacilli. Roentgenogram (posterior-anterior view) showed fluffy appearing opacities in both lungs with demonstration of air bronchogram mimicking diffuse upper-lobe pneumonia (Fig. 1, A). Pulmonary function studies revealed a mild obstructive defect, a moderate restrictive defect, and a severe diffusion impairment. There was mild resting hypoxemia. Intermediate PPD was negative, and mumps control was positive. The endobronchial biopsy was reported as interstitial granuloma with central hyalinization accompanied by epithelioid cells and giant cells, a finding consistent with pulmonary sarcoidosis (Fig. 1, B - a.b.c.). The patient was begun on corticosteroids, and his pulmonary function improved gradually to values which were nearly normal two years after initial evaluation.



Fig. 1,A: Chest roentgenogram (posterior-anterior view) shows fluffy and fuzzy opacities in both lungs with air bronchogram mimicking diffuse pneumonia.

From the Departments of Diagnostic Radiology<sup>(1)</sup>, Medicine, Pulmonary Division<sup>(2/3)</sup>, and Pathology<sup>(4)</sup>, School of Medicine, University of Alabama in Birmingham, Birmingham, Alabama 35213. Reprint requests to Dr. M. S. Shin, Department of Diagnostic Radiology, University of Alabama Hospitals, 619 South 19th Street, Birmingham, Alabama 35233.

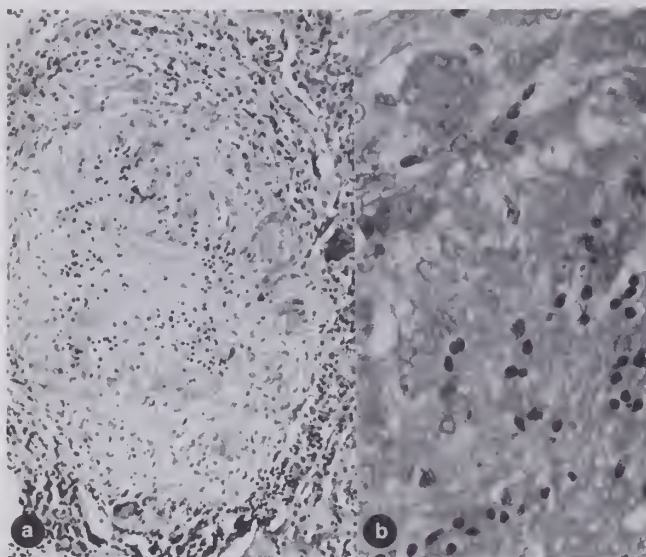


Fig. 1,B(a,b): Interstitial granuloma with central hyalinization. Lung, 40X. Inset, epithelioid cells and giant cells. 160X, H and E.

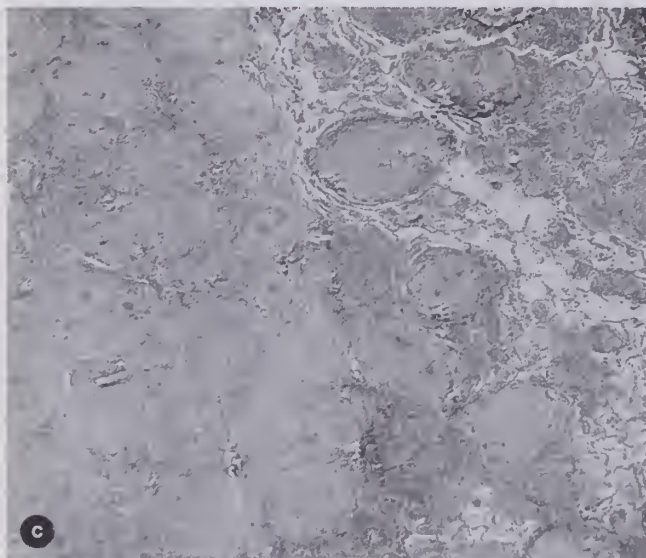


Fig. 1,B(c): Confluent granulomas with focal adjacent atelectasis. Increased numbers of alveolar macrophages and increased intra-alveolar eosinophilic material are present adjacent to the granulomas.

## Case No. 2

A 26-year-old black female had a three-day flu-like illness two months prior to admission. She had a productive cough and whitish sputum. She lost thirteen pounds over the interval between her acute, febrile illness and presentation. She initially was thought to have atypical pneumonia and was managed as an outpatient for three days on Erythromycin. A sudden onset of right pleuritic

chest pain prompted hospitalization. Physical examination on admission revealed lack of fever, dry rales at both bases without evidence of consolidation, a mid-systolic click, and no evidence of eye, lymph node, liver, spleen, joint, or skin abnormality. Laboratory evaluation demonstrated normal electrolytes, calcium, liver function studies, and differential white cell count. A prolapsed posterior leaflet was noted on echocardiogram. Immunofluorescent antibodies for mycoplasma were negative. Rheumatologic screen was negative. Intermediate PPD was negative and trichophyton control was positive. Chest roentgenograms (posterior-anterior and lateral views) showed fluffy opacities in the posterior portion of both lungs, which is well seen on the lateral view. These opacities mimicked the roentgenographic picture of pulmonary consolidations with eosinophilia (Fig. 2, A&B). Pulmonary function studies revealed a severe restrictive defect, a severe diffusion defect, and severe resting hypoxemia. Bronchoscopy demonstrated no endobronchial lesion. Cultures of bronchial washings grew no pathogen. The endobronchial biopsy revealed diffuse interstitial granuloma with giant cells consistent with pulmonary sarcoidosis (Fig. 2,C - a.b.). The patient was treated with high doses of corticosteroid and documented improvement in pulmonary function and roentgenogram at one and five months of therapy.

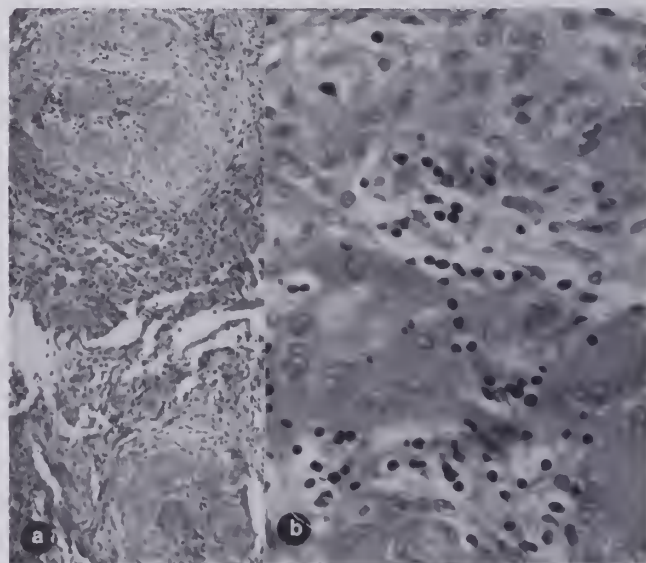


Fig. 2,C(a,b): Interstitial granulomas with giant cells. Lung, 40X. Inset, 160X. H and E.





Fig. 2, A&B: Chest roentgenogram (posterior-anterior and lateral views) shows fluffy opacities in both lungs (posterior aspects) well seen in the lateral view. These

opacities are mimicking pulmonary infiltrations with eosinophilia.

### Case No. 3

A 25-year-old black male presented with a three-week history of low-grade fever, chest tightness, non-productive cough, and dyspnea on exertion, causing him to be unable to do his job as a construction worker. He had used intravenous narcotics in the past. Physical examination was within normal limits. Initial laboratory data was normal except liver function tests which revealed elevated serum glutamic oxidase, lactic dehydrogenase, alkaline phosphatase, and bilirubin. Both intermediate PPD and trichophyton were negative. Chest roentgenogram (posterior-anterior view) showed fluffy, patchy opacities in both upper and right lower lung zones mimicking multiple foci of pneumonia (Fig. 3, A). The pathologic findings of the biopsy specimen obtained via fibroptic bronchoscopic examination revealed extensive granulomas and giant cells with centrospheres and an abortive double asteroid body. These changes were consistent with pulmonary sarcoidosis. After the diagnosis was established, the patient was placed on cortico-steroid and isoniazid. Follow-up chest roentgenogram one and a half years after discharge was entirely normal.



Fig. 3, A: Chest roentgenogram (posterior and anterior view) shows fluffy and patchy opacities in both upper and right lower lung zone mimicking multiple foci pneumonia.

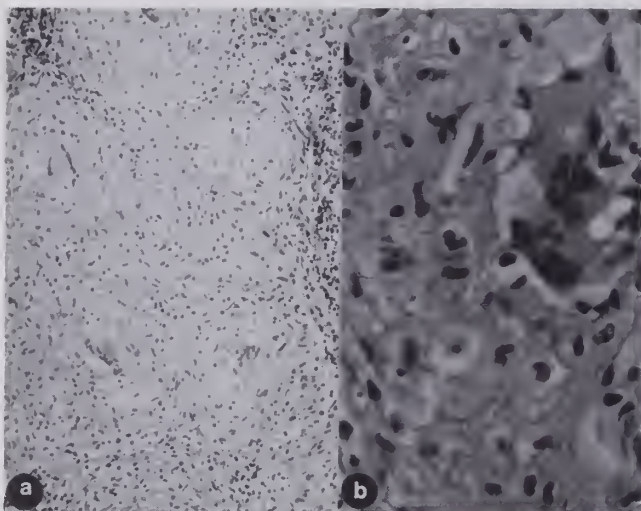


Fig. 3,B(a,b): Lymph node with extensive granulomas. Lung, 40X. Inset, giant cells with centrospheres and abortive double asteroid body. 160X. H and E.

#### Case No. 4

A 23-year-old black female presented with a three-week history of bilateral pleuritic chest pain. She had a productive cough and yellow sputum with one episode of blood-streaked sputum. She was managed for one week on oral antibiotics and was hospitalized with persistent left lower lobe consolidation. Physical examination revealed dullness over the left lower lobe. She had macular areas of increased pigmentation on her trunk. Laboratory abnormalities included a mild resting hypoxemia and hypochromic microcytic anemia. All other laboratory values, including collagen-vascular profile, were within normal limits. Chest roentgenogram (posterior-anterior view) showed fluffy opacities in both lower lung zones mimicking lower lobe pneumonia (Fig. 4, A). The endobronchial biopsy specimen revealed interstitial granuloma with epithelioid cells, and the finding was consistent with pulmonary sarcoidosis (Fig. 4, A&B). Cultures for acid-fast bacilli and fungi were negative. The patient had a negative intermediate PPD with a positive trichophylin. She was discharged on corticosteroid and ferrous sulfate for six months. Because of the prolonged five-year course of her disease, the patient was readmitted recently. She had continued evidence for consolidation at the left base. She was anergic. Serum fungal complement fixation titers were negative. She had a normal hematocrit, but she developed diffuse hypergammaglobulinemia. Bronchoscopy was performed, and fungal and acid-fast cultures of left lower lobe tissue and washings were again negative. She is on no medication at the present time.



Fig. 4,A: Chest roentgenogram (posterior and anterior view) shows fluffy opacities in both lower lung zones mimicking lower lobe pneumonia.

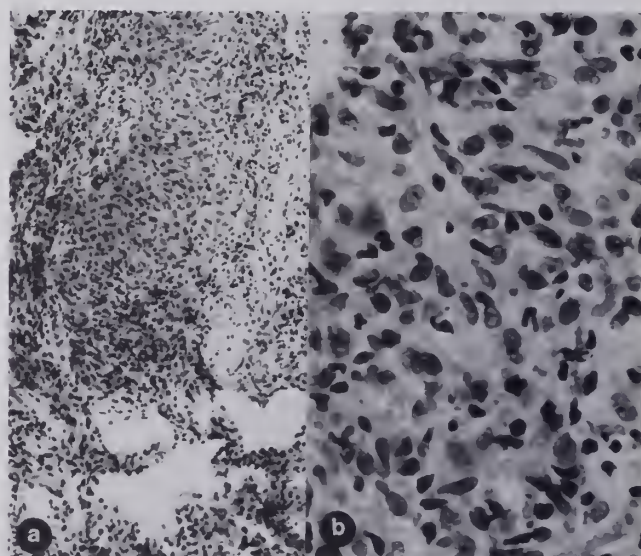


Fig. 4,B(a,b): Interstitial granuloma. Lung, 40X. Inset, epithelioid cells. 160X. H and E.

#### DISCUSSION

Chest roentgenograms of our four patients show ill-defined fuzzy and fluffy opacities in both lungs mimicking pneumonia. In each case, trans-bronchial biopsy shows granulomas characteristic of sarcoidosis. The "pneumonic" opacity noted on roentgenographic examination in each case may be due to extensive confluence of granulomas in these areas as reported by others in the earlier literature<sup>5/8</sup>. This pattern is demonstrated well in



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disturbed... strikes when agitated



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Tridihexethyl Chloride 25 mg—Meprobamate 200/400 mg

No phenothiazine. No barbiturate. No belladonna.  
Providing the highly effective, time proven antispas-  
modic activity of PATHILON<sup>®</sup> Tridihexethyl Chloride to  
relax the bowel, stop the pain...and the classic calming  
action of meprobamate to relieve anxiety.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy for this indication.

Please see BRIEF SUMMARY on following page.

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- **Meprobamate** calms the patient

**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: Possibly Effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension. It should be used as an adjunct to other appropriate measures such as proper diet and antacids.

**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: **Drug dependence:** Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. **Potentially hazardous tasks:** (see above) **Additive Effects:** Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. **Pregnancy and Lactation:** Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlorthalidopoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon); hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With over-dosage, a curare-like action may occur. **Meprobamate:** To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: **CNS:** Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. **G.I.:** Nausea, vomiting, diarrhea. **Cardiovascular:** Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). **Allergic or Idiosyncratic:** (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). **Hematologic:** (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). **Other:** Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

## PNEUMONIC SARCOIDOSIS

the endobronchial biopsy from Case -1- (Fig. 1, B-a.b.c.), in which extensive confluence is noted in an area of pneumonia-like opacity. Entrapped secretions and alveolar macrophages may also contribute to the roentgenographic presentation of this lesion. Destruction of bronchioles by granulomas was not noted in our biopsies, but could be contributory impeding clearance of secretions from involved regions. Each of the five biopsies shows characteristic "sarcoid" granulomas (Fig. 1-4), consisting of relatively large numbers of epithelioid cells, plus giant cells in smaller numbers and a peripheral rim of lymphocytes and other mononuclear cells. A small amount of central necrosis ("hyaline necrosis") is present in some granulomas in each case except Case 4, where the amount of tissue available for study is very small. Acid-fast and Grocott's silver stains did not reveal organisms in any case; examination with polarized light disclosed rare birefringent particles. In all respects, the histological findings noted above are typical of sarcoidosis. Case 1 shows decreased aeration of parenchyma surrounded by granulomas (Fig. 1, B&C). In addition to compression of alveoli adjacent to the granulomas, many alveoli in this open biopsy contain eosinophilic material and increased numbers of alveolar macrophages. Although no uninvolved lung tissue was available from this patient for comparison, alveoli away from areas of granuloma confluence showed these changes to a much lesser extent.

Sarcoidosis presenting roentgenographically with alveolar opacities as the predominant finding is unusual, although Kirk reported an incidence of 20 per cent<sup>5</sup>. Other possibilities must be considered under such circumstances and certainly infectious granulomatous disease, extrinsic allergic alveolitis and hypersensitivity responses from other environmental insults have been associated with noncaseating granulomas. Since sarcoid is a diagnosis of exclusion and not histological confirmation, we can only approach but never reach diagnostic certainty. In these cases there was no evidence of an infectious etiology even after extensive analysis and the only environmental insult noted was intravenous drug abuse in Case 3. While noncaseating granulomas have been noted in the lungs of these individuals, a pneumonic pattern has never been reported. Thus, pneumonic sarcoid is a reasonable diagnosis in these cases but it is rare, less than 1 per cent of the cases of sarcoid in this Institution presented with the picture initially considered to be pneumonia. An interesting feature is pleuritic chest pain, normally rare in sarcoidosis. This occurred in 3 of the 4 cases. This may be a useful clinical clue in cases of chronic pneumonic consolidation.



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# An apple a day won't keep alcoholism away!

The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

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J.C.A.H. ACCREDITED

## Nothing Is Simple

The most obvious results in any new government adventure, such as national health insurance or any of the scores of other medical moonshine bills now in Congress, are not necessarily the most important ones.

It's impossible to predict with any accuracy what the distant consequences, secondary and tertiary, of any alteration in an economic system might be.

Leonard Silk, astute economic writer for *The New York Times*, addressed this subject several months ago. He was talking about another government adventure (energy), but the principle is applicable generally. Mr. Silk:

"An economic system is like a giant mobile hanging from the ceiling: Business or government cannot disturb one part of the system without disturbing the other parts. The economic jargon for this is interdependence.

"A classic example of interdependence occurred during World War II when hog prices were allowed by government to climb sharply relative to other controlled prices.

It then became profitable for hog raisers in the Corn Belt to fatten their animals so much that corn was short elsewhere.

"As a result, iron ore shipping on the Great Lakes was dangerously reduced by priorities to import Canadian wheat for feeding livestock in other areas, such as the Northeast. Tankers needed for shipping petroleum from Gulf ports were diverted for importing Caribbean molasses for industrial alcohol.

"And, because too much skim milk was fed to the hogs, there was a shortage of casein needed for the manufacture of adhesives in a broad range of war-related industries, so casein had to be imported from Argentina."

## Get your practice off to a perfect start.

Brookwood Health Services will help you get established in one of many communities around the country that are served by our fully equipped and accredited hospitals. Brookwood is a rapidly growing investor-owned corporation. And our practice management assistance program can be tailored to meet your particular needs.

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**The AMA  
...working for you**



## Imagine...

Little more than a century ago medical practice was groping through darkness. Surgeons limited themselves to simple operations. Many of those who practiced medicine did so without a formal medical education. Diploma mills did a landslide business in competition with the few legitimate medical schools. There was little formal licensing. Since physicians could do little to treat most diseases, people often sought relief from quacks, cultists, and faith healers.

Among the competent and dedicated physicians there was an acute awareness and concern about the state of the public health and the quality of medical care. In 1847, 250 of these physicians met in Philadelphia to form a national association—the American Medical Association—whose purpose remains the same firm commitment today: *to promote the science and art of medicine and the betterment of the public health.*



## Protecting Your Rights And Interests

One of the AMA's major functions is to act as the advocate for physicians' rights and for the quality of patient care. Effective representation is critical because of the federal government's mounting pressure for tighter regulation and control of medicine.

Every year, the AMA monitors, analyzes and reports on thousands of pieces of health-related legislation and regulations—at both the federal and state levels. To meet specific legislative needs in the health area, the AMA has drafted its own bills.

AMA officers and trustees frequently testify before Congressional committees and federal agencies. During the 95th Congress, the AMA submitted formal, written testimony or furnished witnesses to testify more than 200 times on bills and regulations affecting health care delivery. And, on several occasions, it has been necessary for the AMA to take the government to court. In fact, the AMA spent over \$1,000,000 in 1978 on legal fees to defend the rights of physicians and patients.

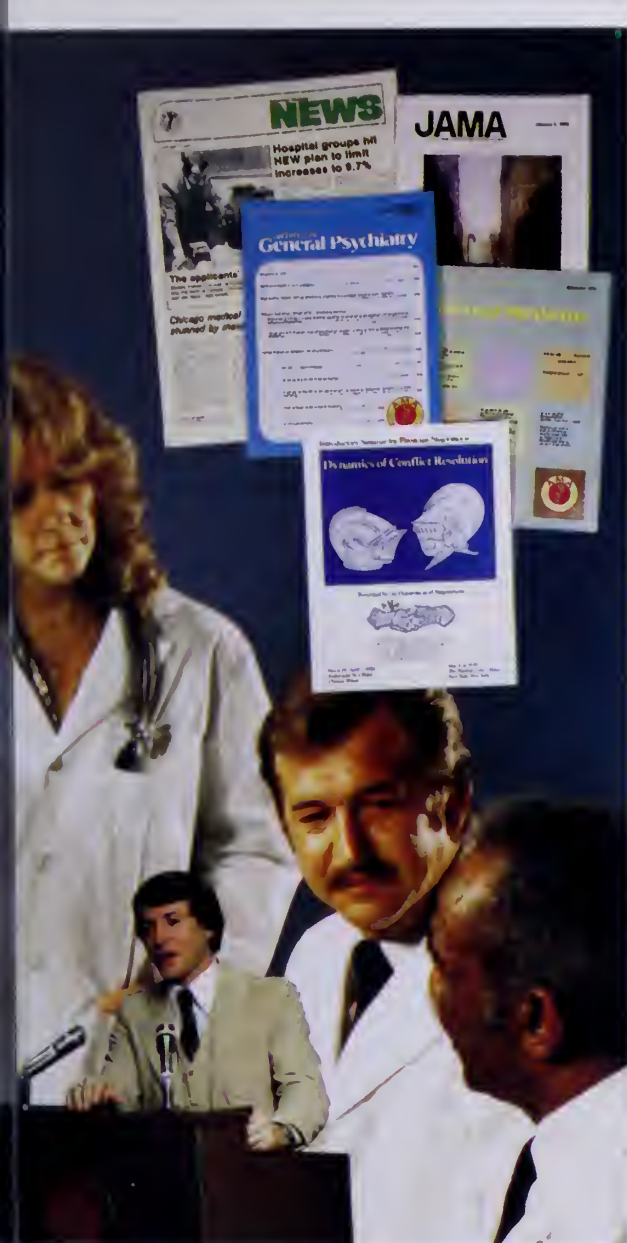
Here are examples of the AMA representing your interests before Congress and governmental agencies:

- The AMA is challenging an FTC administrative judge's initial decision that the AMA cannot establish ethical guidelines on physician advertising and solicitation.
- The AMA is defending three antitrust suits (filed by chiropractors) to preserve medicine's First Amendment rights to speak out on public health issues concerning physicians.
- The AMA worked with hospital groups to defeat the Carter Administration's proposal for rigid cost controls on hospitals which would have adversely affected the quality of care.
- The AMA defeated proposals for federal licensure and re-licensure.

The AMA is also involved in projects to improve rural, inner-city, jail and emergency care; encourage family practice in medicine; curtail TV violence; and the Auxiliary's campaign to promote adequate immunization among the millions of our youngsters.







## Your Membership Benefits

AMA membership provides you with a broad range of both professional and personal benefits and services. Among them are:

### PUBLICATIONS

*Journal of the American Medical Association*—To help you keep on top of the latest scientific developments every week.

*American Medical News*—Provides the latest information on events and personalities affecting the practice of medicine.

*Specialty Journals*—For specific scientific information in your specialty, you have a choice of one of nine specialty journals.

### Members Insurance Programs

AMA insurance programs provide substantial coverage at a cost considerably lower than what you would have to pay on an individual basis. The programs available are: Group Life Insurance, Excess Major Medical, Disability Income Insurance, Supplemental "In Hospital" Insurance, Accidental Death and Dismemberment Plan, and Office Overhead Expense Insurance.

### Seminars

*Negotiations*—Designed to help physicians develop and improve their negotiating skills.

*Practice Management*—Provides proven guidelines for effective and productive management of the physician's practice. Includes physical plant, personnel, procedures, and patient relations.

*Speakers Training*—Instructs physicians in the methods and techniques of effective public speaking.

### Additional Membership Benefits

- The nation's largest physician placement service.
- CME programs—expanded and regionalized to make continuing medical education more convenient and less expensive.
- The research resources of one of the nation's most up-to-date medical libraries.

## The AMA — The Standard-Bearer Of Excellence

Since its inception, the AMA has provided the leadership which has led to the excellence of medical education and the high quality of medical care in this country. No other single organization has assumed such major responsibility for the establishment and maintenance of these standards of excellence.

The AMA participates jointly with other organizations to ensure high quality in both medical education and health care delivery. This is accomplished through the accreditation of medical schools, hospitals, residency training programs, allied health professions training programs, and institutions offering continuing medical education.

Physicians can be secure in the knowledge that hospitals, and allied health professionals have been subjected to stringent training and qualifying standards. If the AMA did nothing more than serve as guardian of the educational standards of the profession, it would deserve the support of all physicians.

# Where Your Dues Dollars Go

**Represent the Medical Profession: 14%** — To represent and serve as an advocate for the medical profession in its relations with state and federal legislative bodies and regulatory agencies. Also includes development of public relations and negotiations programs, and communications with the profession.

**Strengthen Organized Medicine: 11%** — Membership development, membership benefits and services, improved relations with and services to medical and specialty societies.

**Assure and Continue to Improve the Quality of Medical Care: 18%** — Accreditation of undergraduate and graduate medical education, development of continuing medical education programs, certification of physician credentials, and evaluation of the quality of medical care.

**Internal Support Service Programs: 13%** — Financial, planning, legal, personnel, data processing, and administrative services for the Association.

**Promote the Effective Delivery of Care: 7%** — Development of programs for health manpower, community health care, practice management, physician-hospital relations, health care financing, and health delivery research.

**Scientific Policy and Information: 37%** — Publication of scientific journals, dissemination of health information to the public, development of scientific policy, investigation of scientific concerns, such as nutrition, drugs, environmental and occupational health, and hypertension.

## The AMA Needs Your Support

Membership in all levels of organized medicine is an essential component of professional citizenship and like political citizenship, should not be fragmented. Do you want a voice in government only at the city and county levels? Only at the state level? Or only at the national level? Certainly you would feel disenfranchised if you were deprived of a voice on any of these levels.

Citizenship and membership—both political and professional—is not without cost. Your dues, the cost of professional citizenship, are needed at all levels—your county and state society and the AMA—so that organized medicine can remain an effective organization working for you.

### If You're Not An AMA Member, Here's How To Apply

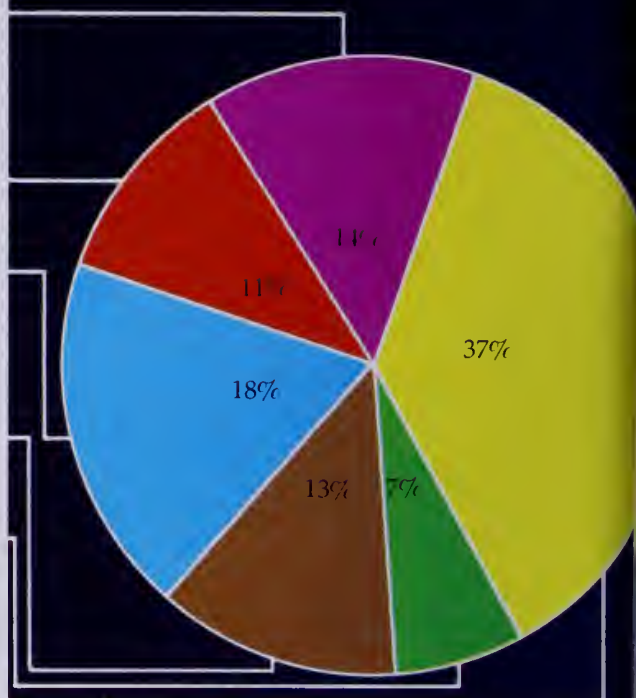
**Regular Membership**—Physicians, including housestaff, and medical students who are members of their state medical societies or who are eligible for state society membership are required to join the AMA through that society. Simply contact your local medical society. (If you do not have this information, write the Department of Membership Development, AMA, and the name and address of your local society will be sent to you.)

**Direct Membership**—Physicians, including housestaff, and medical students who are not provided with an avenue for regular active membership through their local society due to limitations or bylaw restrictions of that society may join the AMA as direct members. To join, use the application enclosed.

**Transfer Membership**—An AMA member who moves from one medical society to another may maintain or renew membership while application is pending in the new medical society.

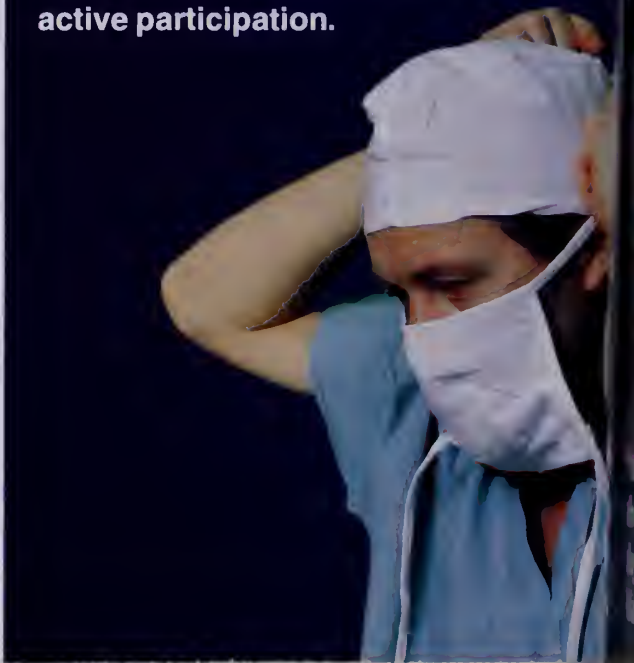
### Dues

Physicians	\$250	Interns, Residents	\$35
First Year Practice	\$125	Medical Students	\$15



If you are an AMA member, you should be justifiably proud of what your support has helped the AMA accomplish.

If you are not a member, isn't it time you did your share to support your profession? Join the AMA now. It needs you — your membership and your active participation.





# What's happening here?



☐ Tissue Committee    ☐ Surgical staff    ☐ Record Review

☒ Mutual Assurance Claims Committee Meeting

Nobody knows more  
about Alabama  
physicians than  
Alabama physicians.



**Mutual  
Assurance**

# Are you suffering from F.P.S.\*?

\*flourishing practice syndrome.

## Symptoms:

- ☐ Excessive lost charges
- ☐ Slow third-party carrier payments
- ☐ Lack of management information about your practice
- ☐ Need for more office personnel to prepare insurance claim forms
- ☐ High turnover of office personnel
- ☐ Disgruntled patients resulting from disorganized office procedures
- ☒ All of the above

## Diagnosis:

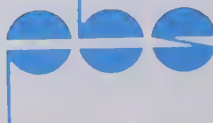
- ☐ Uncontrollable external factors (i.e. inflation, government regulations, etc.)
- ☐ Poor Management
- ☐ Fate
- ☒ Normal problems associated with a growing practice

## Prescription:

- ☐ Early retirement
- ☐ Increase manpower (more overtime or additional personnel)
- ☐ Turn over your confidential records to a service bureau who knows nothing about your practice and trust that your work will be processed with the same care and consideration that you expect from your office personnel.
- ☐ Buy an expensive computer with a "medical" package from one of the "big" computer companies and alter your practice to conform to the computer.
- ☐ Buy an expensive computer and hire several expensive programmers to develop your own system regardless of how much time and money it takes to complete.
- ☒ Invest in the Data Med system — a self-contained professional practice management system that was developed by a doctor for doctors. The practicing Vascular Surgeon that developed this system investigated the other "computer" alternatives and found none that met his stringent standards. Then, with the assistance of numerous fellow physicians, he layed out a comprehensive array of requirements and objectives and proceeded to design the ensuing Data Med system. If you and your office personnel need assistance in resolving your "symptoms" but are concerned about the cost of such a system, consider it an investment. Most of the practices using the Data Med system saved enough money in the first year to completely recover the cost of the system.

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site of the injury, and be transported to a hospital with optimal facilities (burn unit, burn center) dependent upon distance and time, burn complication (respiratory, shock) and bed availability. Direct communications and transfer agreements in this regard are extremely important. If seriousness of the injury dictates transportation to closest effective emergency department or special expertise hospital, then transfer to hospital with optimal facilities should be arranged after cardiopulmonary stabilization and intravenous fluid therapy for shock are established. Rehabilitation including corrective surgery for cosmetic and functional deficiencies complete the therapeutic circle.

B. *Moderate Uncomplicated Burn Injury.* Second degree burns of 15-25% in adults (10-20% in children) with less than 10% third degree burn and which does not involve eyes, ears, face, hands, feet, perineum. Excludes electrical injury, complicated injuries such as fractures, inhalation injury, and all poor risk patients (extremes of age, intercurrent disease, etc.).

C. *Minor Burn Injury.* Second degree burn of less than 15% BSA in adults (10% in children) with less than 2% third degree burn, not involving eyes, ears, face, hands, feet, perineum. Excludes electrical injury, inhalation injury, complicated injury, such as fractures, and all poor risk patients (extremes of age, intercurrent disease, etc.).

The Alabama State plan for burn care follows closely the severity of burn injury as detailed by the ABA criteria. In essence, our plan states minor burn injury can often be treated on an outpatient basis, moderate burn injury can be treated in most hospitals, and major burn injury should be treated in hospitals with special expertise in burns. In Alabama there are only two hospitals capable of caring for major burns—University Hospital in Birmingham and the University of South Alabama Hospital in Mobile. Hence, in reviewing the system for burn care in West Alabama, we note that all hospitals are capable of providing care for minor and moderate burn injuries, and that major burn injuries should be referred to the University Hospital in Birmingham.

Referral of burn patients to the University Hospital in Birmingham from throughout the state is enhanced by the medical information service via telephone (MIST). MIST was inaugurated in 1969 as a service to all physicians in the State of Alabama. It is a toll free number and can be utilized by

physicians and other health care providers to obtain information rapidly, and is also used as a means of arranging transfer patients with complex medical disorders. This MIST service has allowed for consultation regarding burn patients from all over the state as well as the particular area of West Alabama. This has allowed the local physician to treat minor burns properly, and for him to refer burn patients which need to be transferred. In particular, it allows for consultation between physicians to prepare a patient with major burn injury for transfer to the University Hospital. This insures that the patient has intravenous fluid started to begin the treatment of shock as soon as possible, oxygen is administered as soon as possible, and optimal burn wound care as well as other aspects of burn care. Therefore the patient is better prepared for his travel, and is received in better condition at University Hospital.

**TABLE 1**  
**HORIZONTAL/VERTICAL CATEGORIZATION**  
**WITHIN, OUTSIDE REGION**

Horizontal	Trauma, Burn Vertical Critical Care Capability	
General Emergency Classification*	Name of Hospital	Trauma** Burn***
II	Druid City Hospital	T <sub>2</sub> B <sub>2</sub>
IV	Bibb County Hospital	T <sub>3</sub> B <sub>3</sub>
IV	Fayette County Hospital	T <sub>3</sub> B <sub>3</sub>
IV	Greene County Hospital	T <sub>3</sub> B <sub>3</sub>
IV	Hale County Hospital	T <sub>3</sub> B <sub>3</sub>
IV	Lamar County Hospital	T <sub>3</sub> B <sub>3</sub>
IV	Pickens County Hospital	T <sub>3</sub> B <sub>3</sub>
<b>Outside Region</b>		
I	Birmingham University Hospitals (Including UAB Burn Center)	T <sub>1</sub> B <sub>1</sub>
* AMA Criteria	** ACS Criteria *** ABA Criteria	

Based on the categorization of West Alabama and the state plan, the community hospitals are capable of treating minor burns. Druid City Hospital, the regional facility at Tuscaloosa, is capable of handling minor and moderate burns. All major burns are to be referred to the Burn Center in Birmingham, and may be transferred directly, bypassing the regional hospital, from the community hospitals. Written transfer agreements are in place, along with pre-hospital and inter-hospital treatment and triage protocols for care of burn victims and successive triage to definitive care. For the purpose of this study, data was reviewed from ambulance run reports, emergency room reports, hospital records from within the region and from the University of Alabama Hospitals Burn Center, and from the Alabama Department of Public Health's Bureau of Vital Statistics. For the community hospitals in West Alabama, no attempt was

made to gather data on outpatient burns. The main objective was to track moderate and major burns to assure that burn victims are reaching the definitive level of care within the EMS plan. The patient category for the study are those in the ICDA 940.0-949.9 classifications. The tracer group was the major burn category, based on the 30 per cent BSA classifications contained in the transfer agreements and as modified by the ABA criteria for major burns classification. However, for the purpose of this study, the tracking group was further modified to those burn patients with a stay of 14 days or more in a hospital. For comparative purposes, data also is included for prior years. Financial data for the regional hospital and the UAB Burn Center are included, but no effort was made to include the community hospitals, since only minor burns should be involved.

## IMPACT AND COMPLIANCE FINDINGS

A survey of the seven community hospitals in the six rural counties showed a total of 39 burns requiring inpatient care. Thirty-three of these, involving first and second degree minor burns, were kept in the community hospitals; two involving 1st and 2nd degree moderate burns were transferred to the regional hospital at Tuscaloosa, and four involving major burns were transferred to the burn center in Birmingham. At the regional hospital, a total of 688 burns were treated in the emergency department, seventy minor or moderate burns were admitted to the regional hospital and two other major burns were transferred to Birmingham—three to the UAB Burn Center and one to Children's Hospital which are part of the UAB Hospitals.

**TABLE 2**  
**Incidence of Burns by Counties—1977**

County	Admitted Community Hospital	Transferred Regional Hospital	Transferred UAB Burn Center
Bibb	3*	0	1
Fayette	12	0	1
Greene	1*	0	0
Hale	3	1+	0
Lamar	10	0	1
Pickens	4	1+	1
Tuscaloosa** (Regional Hospital)	71	—	2

\* First Degree only (other community hospital totals include 1st and 2nd degree)

+ Moderate Burn

\*\* Includes minor, moderate and major, with major burns being transferred

(1) Transferred from regional on to Burn Center

Of the non-transferred burn victims, there were no deaths and only four patients were hospitalized longer than 14 days. Three of the four involved instances where minor burn patients were kept at a community hospital for medical complications unrelated to the burn injury and the fourth involved an elderly victim whose home was burned, and since he had no family and no home, was kept in the hospital until arrangements could be made to get him into a nursing home. Average length of stay at the community hospitals was eight days. At the regional hospital, the average length of stay was 10 days.

**TABLE 3**  
**DEATHS IN WEST ALABAMA DUE TO BURNS BY FIRE  
AND FLAME  
1974-1975**

Name of County	1974	1975
Bibb	0	2
Fayette	0	2
Greene	0	0
Hale	0	1
Lamar	0	0
Pickens	2	0
Tuscaloosa	9	7
Totals	11	12
Totals for state	158	164

Source: Alabama Dept. of Public Health, Bureau of Vital Statistics

Patient outcome studies for the community and regional hospitals within the West Alabama region for 1977 indicate that all were discharged alive with no evident disabilities. An outcome study on those transferred to the burn center (major burn patients) has now been completed. An outcome study on six patients transferred from West Alabama to the Burn Center during the period of July 1, 1976 to December 31, 1976 shows a 50 per cent survival rate. Four of the six were admitted to the burn center on the same day of burn and the other two within 24 hours. Of the three deaths, one involved a 22-year-old black male with 70% BSA (15% 2nd degree and 55% 3rd degree) who expired five days after admission with primary cause of death listed as Septicemia. The second involved a 69-year-old white male with 85% BSA (10% 2nd degree and 75% 3rd degree) who died two days after the burn, with cause of death listed as myocardial failure. The third involved a 64-year-old black female 18% BSA (6% 2nd degree and 12% 3rd degree) burns who died three days after being burned. Cause of death for the Greene County woman who was admitted to the burn center within 24 hours of the burn was listed as respiratory obstruction. The two males cited earlier were from Tuscaloosa County.

Continued on page 46





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### How Supplied:

Pale green 300 mg. tablets  
in bottles of 100 and Single Unit Packages of 100  
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Injection, 300 mg./2 ml.,  
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and in 8 ml. multiple-dose vials,  
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**When painful spasm  
is the presenting  
symptom...**





...in the functional bowel/irritable bowel syndrome\*

# Bentyl<sup>®</sup>

## (dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,  
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity  
with minimal anticholinergic side effects†

### Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

# Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis), paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup. **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection. **Adults:** 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiltwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Ocaturo, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

## Merrell

MERRELL NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc.  
Cincinnati, Ohio 45215 U.S.A.

## REFERENCES

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# Epidermoid Carcinoma of the Stomach

By  
Charles L. Cox, Jr., M.D.\*

Squamous cell carcinoma of the stomach is an extremely rare tumor. Straus et al. reviewed the world literature in 1969<sup>1</sup>, and reported 85 cases of either pure squamous cell carcinoma or adenosquamous carcinoma of the stomach. Of these, 45 cases were pure squamous cell carcinoma, and 41 were adenosquamous. This included the case that they reported at that time. Of these, only five squamous cell carcinomas were reported in females. Such rarity, therefore, warrants a report of an additional case.

## CASE REPORT

A 55-year-old Caucasian female was admitted to Jackson Hospital, Montgomery, Ala., on March 10, 1977. She had been hospitalized at a local hospital, approximately three months previously, at which time she had complaints of back pain in the upper lumbar area. Complete x-ray evaluation at that

time, including upper GI series, barium enema, IV pyelogram, and other studies were interpreted as negative. Her local physician felt that she had "arthritis" and had started her on salicylate therapy. On admission to this hospital, she stated that her back continued to hurt her, and that she had developed epigastric and left upper quadrant distress. She was anorexic, but had not vomited. She gave a vague history of possible melena. Her local physician had observed a drop of her hemoglobin to 9 grams per cent. It was felt that this was most likely due to a gastritis, secondary to antiarthritic therapy. Past medical history included a previous cholecystectomy and hysterectomy. She also had a history of ureterolithiasis. Physical examination revealed a moderately obese woman, who was febrile and appeared somewhat anxious. Mucous membranes were pale, pulse rate 120. There was vague tenderness in the upper epigastrium extending around the left upper quadrant, no masses were noted. The remainder of the physical was essentially normal. Laboratory revealed hemoglobin 8.8 grams per cent, hematocrit 28 per cent, WBC 11,8000, Monos 6, lymphs 21, polys 65, bands 2, eosinophils 6. Urinalysis: specific gravity 1.022, PH 6, protein 0,

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glucose 0, ketones 1 plus, bilirubin 0, occult blood 0, microscopic negative. Chest x-ray showed bilateral lower lobe infiltrates, which was felt to be acute pneumonitis. Upper GI series and lumbar spine x-rays were interpreted as negative. Bone scan was also negative. Intravenous pyelogram and barium enema were within normal limits. The electrocardiogram was normal. Sputum cultures, blood cultures, urine cultures were negative for pathogens. Her sedimentation rate on admission was 100.

She was treated with multiple blood transfusions, antacids, anticholinergics, and antibiotics. The infiltrate in her lungs improved. However, she continued to run a febrile course, associated with an elevated sedimentation rate. Febrile agglutinations revealed typhoid H positive 1-640. RA test: negative, ANA test: negative. Blood smears for malaria were negative. Chemistry profile was within normal limits. Serum electrophoresis revealed a pattern similar to that as seen in acute inflammatory conditions. Stool cultures were negative, and stool for occult blood were negative.

An additional history was obtained from the patient that there had been a case of typhoid fever in her community. In view of her elevated typhoid H titer, and in spite of negative cultures, it was elected to try her on therapeutic trial of Chloromycetin. However, this did not affect her febrile course.

Her hospital course was complicated by an episode of acute deep phlebitis of the left leg, which delayed surgery but responded to conservative therapy.

An exploratory laparotomy was done April 18, 1977. At surgery, a 6 cm. gastric ulcer was noted in the posterior wall of the fundus. The tumor was flat and did not protrude anteriorly, but had infiltrated posteriorly into the pancreas, and the retroperitoneal space. A biopsy was taken. A diagnosis of squamous cell carcinoma of the stomach was made. (Fig. 1 and 2) It was felt this lesion was inoperable. She was treated with radiation, a total of 3,000 rad cobalt was administered with prompt improvement in her general condition. Her temperature returned to normal, and she was discharged to be followed on an out patient basis. She remained in remission for approximately three months, at which time she was readmitted to the hospital and expired August 9, 1977.

Postmortem examination revealed a 3.5 cm. white tumor mass with ulcerated mucosa in the posterior wall of the fundus. This carcinoma did not spread along the wall of the stomach. It grew posteriorly and to the left. It involved the pancreas, left adrenal and was attached to the spleen and left

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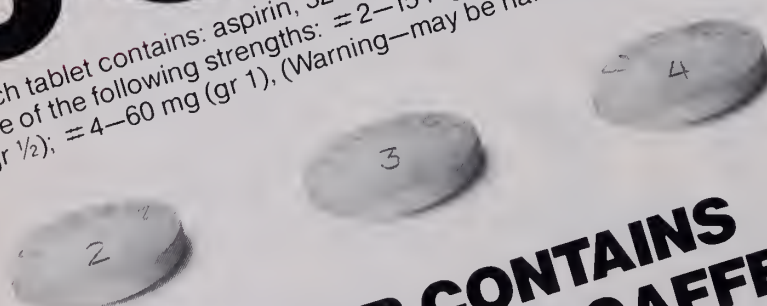
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kidney. There was one 3 cm. metastasis in the left lobe of the liver. Examination of the esophagus and the esophageal-gastric junction was negative for carcinoma. There was a 5 cm. margin between the esophageal-gastric junction and the squamous cell carcinoma. Microscopically, the carcinoma was formed of epidermoid type squamous cells forming keratin. There was no evidence of involvement of other portions of the gastro-intestinal tract.

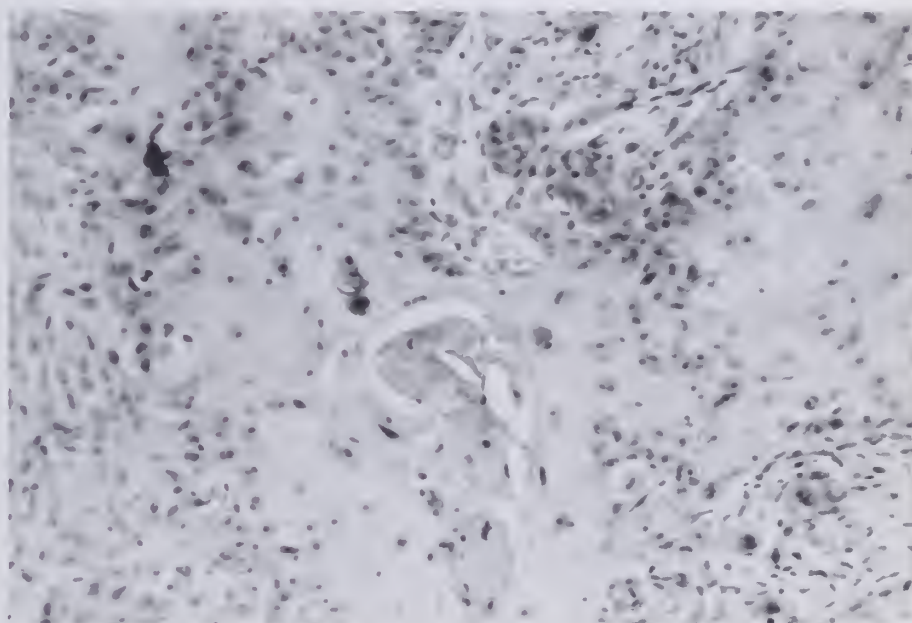
## SUMMARY

A case of primary epidermoid carcinoma of the stomach in a female is presented. These are exceedingly rare tumors. Its pathogenesis is

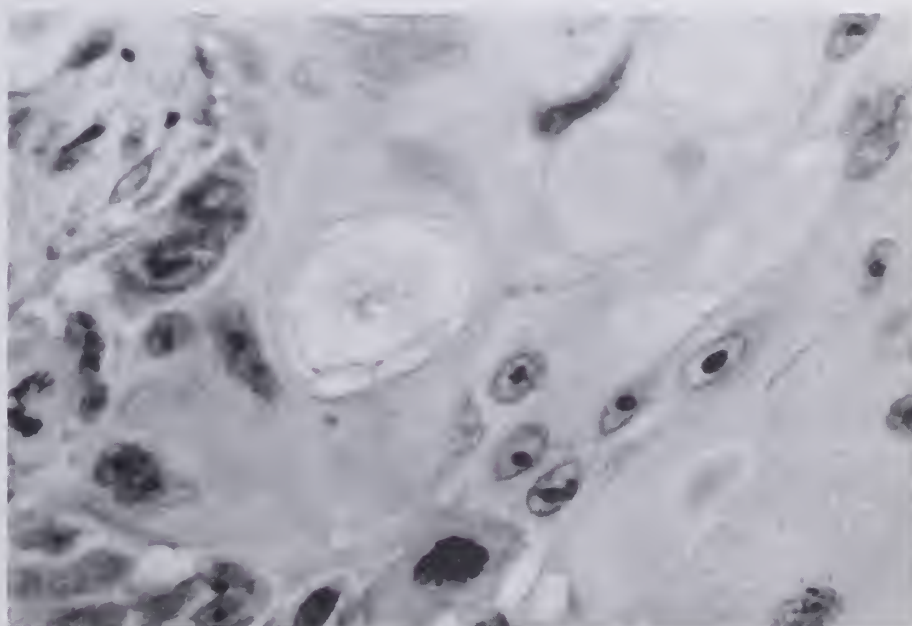
unknown, but probably developed from an area of pre-existing squamous metaplasia, from ectopic squamous epithelia, or possibly from the endothelium of regional blood vessels. The exact pathogenesis, however, is unknown.

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100X: Epidermoid Carcinoma, wall of stomach.



450X: Higher power view of epidermoid carcinoma (Figure 1).

Outcome data for the six burns admitted during 1977 show all were major burns, all were admitted to the Burn Center in Birmingham on the same day of burn, and all were discharged alive. This represented a 100 per cent compliance rate and a 100 per cent survival rate. The six included a Fayette resident with 20% BSA burn, including hands and feet, hospitalized 38 days; A Pickens County resident with 60% BSA burn, hospitalized 110 days; A Lamar County resident with 45% BSA burn, hospitalized 49 days; a Bibb County resident with 3% BSA 3rd degree burns involving complications, hospitalized 27 days; A Tuscaloosa male with 75% BSA Burn (55% 2nd and 20% 3rd), hospitalized 66 days; and another Tuscaloosa resident with 2% 3rd degree burns involving feet, hospitalized 32 days. Average length of stay was 54 days.

Over the 18 month period, a total of 12 major burn victims were transferred from the region to the Burn Center outside the region with a 75% survival rate (a 100 per cent rate for 1977). Burn mortality data (see Table 3) from the Alabama Dept. of Public Health's Bureau of Vital Statistics is presently unavailable beyond 1975, but based on incomplete data, mortality for West Alabama is expected to show a decline in West Alabama for 1976 and 1977.

Patient cost comparisons for the regional hospital at Tualoosa and the Burn Center in Birmingham are shown in Tables 4 and 5. As expected, the costs for operating a comprehensive burn unit is greater than that of the regional hospital where no specialized burn unit is staffed full-time.

**TABLE 4**  
**Average Length of Stay, Patient Costs Per Day**  
**Druid City Hospital**  
**1975 To 1977**

	1975	1976	1977
Average Length of Stay (days)	12	10	10
Average Charge Per Day	\$129	\$155	\$163
Total Patients	61	5	70

**TABLE 5**  
**UNIVERSITY HOSPITAL BURN CENTER**  
**1974-1976**

Burn Classification	Average Days in Hospital			Average Charge Per Day	
	1974	1975	1976	1975	1976
Minor	15	16	15	\$180	\$216
Moderate	19	28	23	\$211	\$279
Major	29	34	25	\$301	\$400
Average	21	30	22	\$274	\$360

## DISCUSSION

In a previous study of the West Alabama EMS System conducted by Dr. Alan Dimick, director of the UAB Burn Center in Birmingham, relative to compliance figures from West Alabama for 1975 and 1976, a referral compliance of 80 per cent was found for major burns and 90 per cent when moderate burns were included.

During 1975 and 1976, 106 burn patients were admitted to Druid City Hospital and their average length of stay was 11 days. All were minor or moderate burns, with all major burns being referred. During the same period, the number of patients admitted to all hospitals was 145, and the number of patients admitted from the West Alabama region was 15. During that period, one instance was reported where a patient with 45% body surface area burn was kept in a rural hospital for nine days before developing complications of infection. He was then transferred to the burn center. With that one exception, no major burn was kept by the community or regional hospital.

During the three year period, 1974-76, a total of 20 West Alabama citizens were transferred to the burn center in Birmingham, of which 16 were classified at the burn center as major, two as moderate, and two as minor. With the additional six major burns transferred in 1977, the total for a four-year period is 26, or an average of 6.5 per year. Based on this experience, West Alabama can expect a burn incidence rate of 3 per 100,000 population.

Improved response times, better trained emergency medical technicians and the addition of advanced life support units, transfer agreements, categorization of hospitals, and implementation of pre-hospital and inter-hospital protocols for pre-hospital treatment and triage through medical control, and well-defined transfer procedures are impacting burn care in West Alabama.

## Summary and Conclusions

1. A regional burn program as part of a comprehensive EMS system has been developed in West Alabama during 1975 to 1978.
2. Major program elements such as categorization of hospitals, operations narrative, and chronologic sequence of BLS and ALS program development has been described.
3. Patient profiles, compliance formulations of general at risk population and tracer studies of sub-group patients have been presented.
4. This study supports the concept of improved burn care for victims of major burns through



improved patient outcome through identification and successive triage to specially designated centers for expert definitive care.

5. Data presented is consistent with existing literature.

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# In Siblings:

## Hirschsprung's Disease

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In February 1979, we encountered a male child with Hirschsprung's disease and aganglionosis involving the ileum and colon. This child's sister had been seen at The Children's Hospital of Birmingham in 1976, with aganglionosis of the high type beginning in the splenic flexure limb of the transverse colon. Warkany<sup>1</sup> states, "Familial cases have been observed repeatedly, suggesting genetic determination of the disease". He quotes Madsen as listing 36 families on record of which more than one member was affected. The overall incidence of Hirschsprung's disease in the general population is considered to be 1 in 5,000.<sup>2</sup> Six cases have been diagnosed at Children's Hospital in the first six months of 1979. Two of these by the fourth day, one by the sixth, but three were not diagnosed until the twenty-fifth day, sixth week or seventh month. Since this is a disease which is potentially diagnosable in the first 24 hours, we would like to emphasize that a full term, well developed newborn infant that appears perfectly normal except for no stooling in the first 24 hours should be

considered to have Hirschsprung's disease until proven otherwise.

### Case Reports

Case I. MF, a white female, was born on 2/5/76, at term with a birth weight of 6 lb. 14 oz. The birth was complicated by the mother's having a 24-hour viral infection at the time of delivery with fever, vomiting and diarrhea. In reviewing the chart, it was found that the physician stated: "Infant did well immediately post birth but two days afterward, began spitting up a greenish fluid and having frequent stools". Review of the nurses notes, however, disclosed that *the child had no stools for the first three days* and it was only after that time that the patient began to have liquid bowel movements that continued until the time of admission to this hospital on the fourth day. The child was also vomiting bile at this time.





Fig. I

Physical examination revealed a dehydrated white female child, weighing 6 lb. 9 oz. as compared with the birth weight of 6 lb. 14 oz. Rectal temperature was 100°, pulse rate 170, respirations 60 and blood pressure 60/35. Abdominal examination showed the abdomen to be soft, without tenderness and no evidence of organomegaly or masses. On rectal examination brown liquid stool was noted but nothing else.

Because of the diarrhea, stool studies were done which later proved to be negative. In the meantime, however, the patient was placed on Kantrex, penicillin and was given fluids. The child was transferred to the medical service as the surgeons felt that in view of the mother's history of diarrhea and vomiting, possibly this was the child's problem as well.

X-ray studies of the abdomen on 2/8/79 (*Figure I*) showed a gas filled stomach with scattered nondistended gas filled loops of bowel throughout the abdomen. Repeat film of the abdomen on 2/11/76

Fig. II



Fig. III



(Figure II) revealed multiple distended gas filled loops of bowel throughout. On 2/13/76, the patient was referred for a barium enema because of the persistence of the diarrhea. On this examination (Figure III) a transition zone was found in the region of the splenic flexure with dilatation of the colon proximal to this area. Meconium plug syndrome was considered but not thought to be likely in view of the diarrhea. The two other possible diagnoses were "small left colon syndrome" or a high type of Hirschsprung's disease. Because of the more likely possibility of the latter, rectal biopsy was done, showing the absence of ganglion cells. This was followed by abdominal exploration at which time multiple biopsies disclosed a lack of ganglion cells from the transverse colon limb of the splenic flexure anad.

Case II. BF, a white male, was admitted to The Children's Hospital of Birmingham Feb. 25, 1979, at three days of age. The chief complaint was of vomiting since 12 hours after birth.

*Present Illness:* Bile stained vomiting began at 12 hours of age and was continuing at the time of admission. *The child did not stool during the first 24 hours* but did pass meconium when rectal examination was done. At two days of age, the child began having small green stools. There was no abdominal distention, however. During the second day the green stools became more frequent. The child was referred to this hospital with the clinical diagnosis of intestinal obstruction.

*Family History:* There was a 3 year old sibling who had had long colon segment Hirschsprung's.

Supine film (Figure IV) of the abdomen taken after admission on 2/25/79, showed a small amount of residual barium in the colon from a previous enema study which reported an "unused colon." Only a small amount of gas could be seen in the nondistended loops of small bowel in the left upper quadrant. Persistence of the vomiting of bile, lack of abdominal distention and previous radiographic evidence of an unused colon suggested to the clinician a high type of small bowel obstruction. An upper G.I. and small bowel studies were requested. These were carried out on 2/26/79, and as Figure V demonstrates, the stomach and duodenum were normal, but when the barium reached the terminal jejunum, a distended fluid filled loop of bowel was found. The barium was followed fluoroscopically and radiographically over a 5-hour period, by which time (Figure VI), the head of the barium column had reached the rectum. The distended gas filled loop of bowel was still evident in the right upper quadrant. The findings were felt to indicate partial intestinal obstruction in the region of the jejunoileal junction.



Fig. IV



Fig. V





Fig. VI



Fig. VII

Barium enema examination was repeated on 2/28/79 (Figure VII) revealing an "unused colon" with redundant flexures and rapid reflux into the terminal ileum. Radiographic impression was that of partial small bowel obstruction, probably due to total aganglionosis of the ileum and colon. This impression was reinforced by the history of Hirschsprung's disease in the other sibling. The radiographic findings in these cases are not specific, however, as similar changes can be due to low jejunal or high ileal stenosis, small bowel duplication, internal hernias, and even possible malrotation.

**Summary:** We have presented two cases of Hirschsprung's disease occurring in siblings, one of the total aganglionosis type and the other the high type with the transition zone in the splenic flexure area. We would like to re-emphasize the frequency of Hirschsprung's disease and reinforce the thought that a full term, well developed newborn infant with no stooling in the first 24 hours, vomiting of bile, with or without abdominal distention is Hirschsprung's disease until proven otherwise.

## DESCRIPTION OF FIGURES

**Figure I.** Case I. Supine film of the abdomen at 3 days of age showing less than the normal amount of gas one would expect in the small bowel with a distended gas filled loop in the epigastrium which, in retrospect, probably represented transverse colon.

**Figure II.** Case I. Supine view of the abdomen at 6 days of age disclosing multiple distended gas filled loops of bowel with a picture similar to that seen with Hirschsprung's disease, mucoviscidosis and ileal stenosis or atresia.

**Figure III.** Case I. Barium enema study on the 8th day of age revealing a transition zone in the region of the splenic flexure as indicated by the arrow.

**Figure IV.** Case II. Supine film of the abdomen at 3 days of age with gas in the stomach and in several loops of small bowel in the left upper quadrant. A minimal amount of residual barium is present in the colon from previous barium enema.

**Figure V.** Case II. Small bowel study revealing dilated terminal jejunum and a "fluid block".

**Figure VI.** Case II. 5 hour film of small bowel study showing a dilated loop of small bowel in the right upper quadrant. The head of the barium column is in the rectum.

**Figure VII.** Case II. Barium enema demonstrated an "unused colon". Findings were otherwise normal.

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**PRECAUTIONS:** Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication. Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

**ADVERSE REACTIONS:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

## DOSAGE AND ADMINISTRATION:

1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

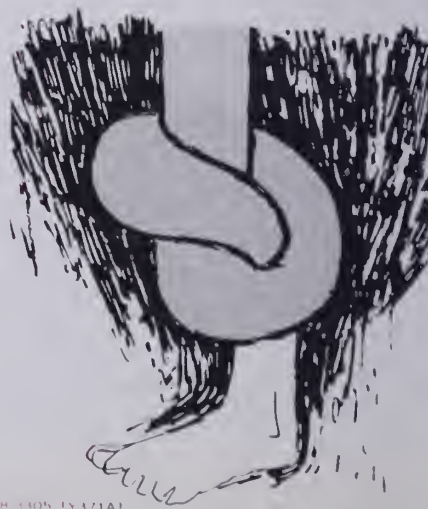
U.S. Patent 2,985,558

# Merrell

MERRELL-NATIONAL LABORATORIES Inc  
Cayey, Puerto Rico 00633

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for Knotts in the night



# Quinamm<sup>TM</sup>

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

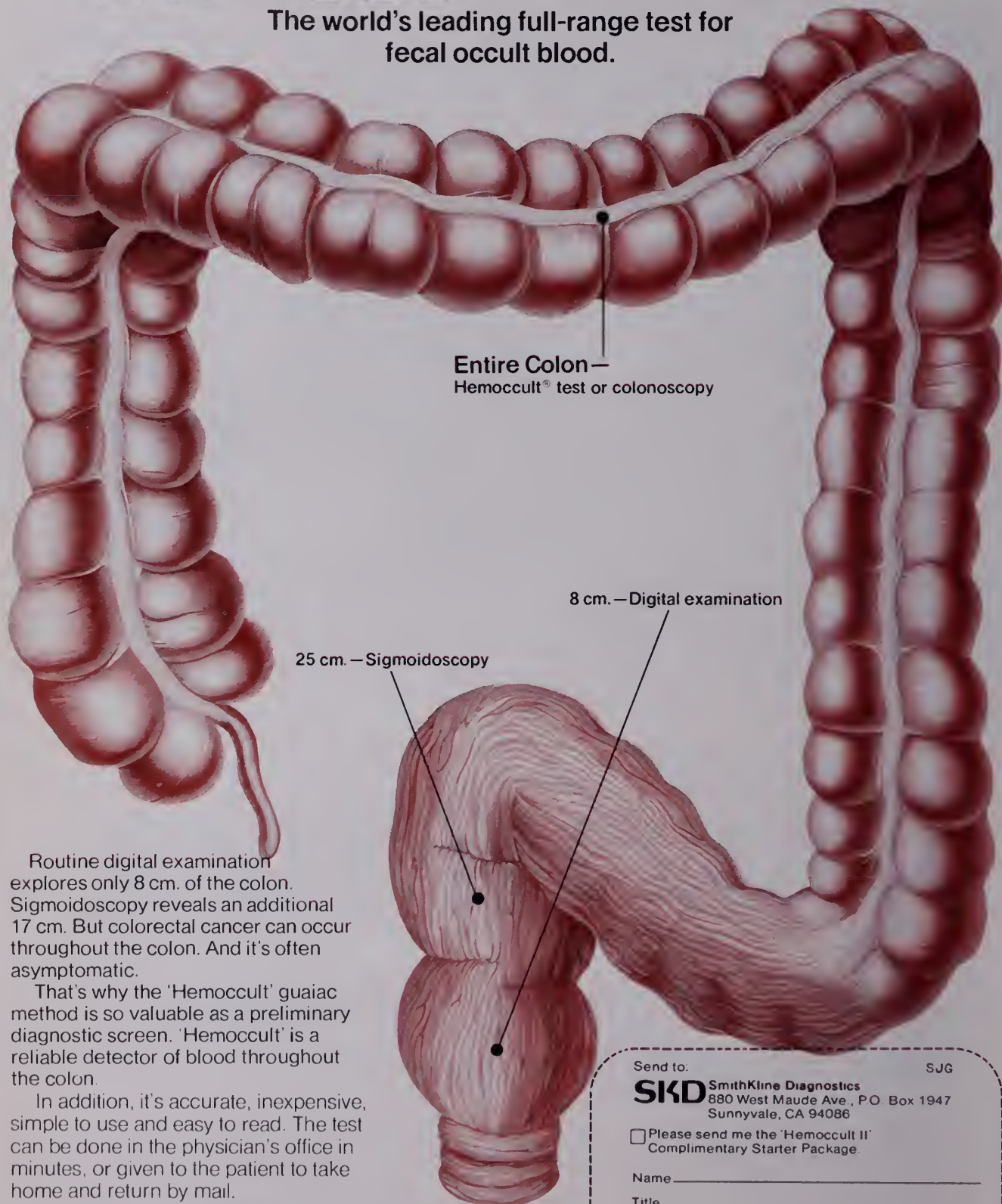
## specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease... consider Quinamm... simple, convenient dosage—usually just one tablet at bedtime... can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.

# Hemoccult®

The world's leading full-range test for  
fecal occult blood.



Routine digital examination explores only 8 cm. of the colon. Sigmoidoscopy reveals an additional 17 cm. But colorectal cancer can occur throughout the colon. And it's often asymptomatic.

That's why the 'Hemoccult' guaiac method is so valuable as a preliminary diagnostic screen. 'Hemoccult' is a reliable detector of blood throughout the colon.

In addition, it's accurate, inexpensive, simple to use and easy to read. The test can be done in the physician's office in minutes, or given to the patient to take home and return by mail.

More than 112,000 cases of colorectal cancer will occur in the United States this year. The earlier they are diagnosed, the greater the chances for successful treatment.

'Hemoccult' is available through local distributors, nationwide.

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☐ Please send me the 'Hemoccult II'  
Complimentary Starter Package.

Name \_\_\_\_\_

Title \_\_\_\_\_

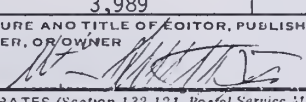
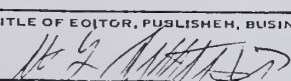
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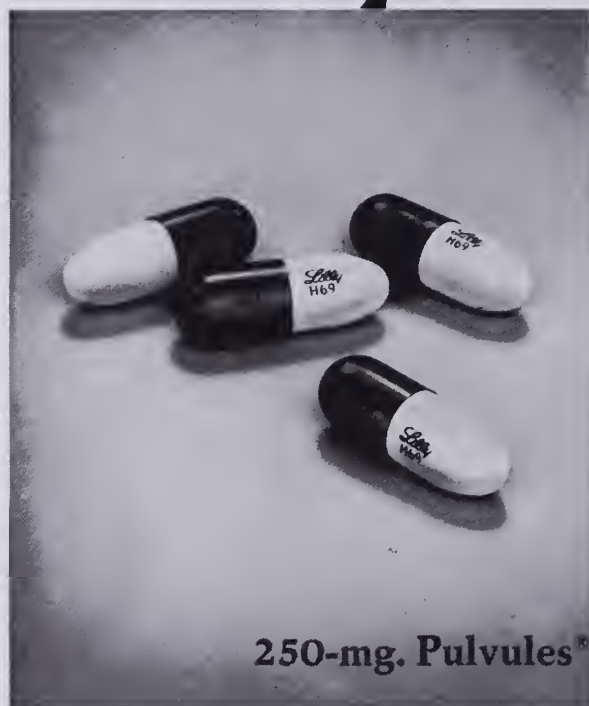
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# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

CARDIOLOGY/INTERNAL MEDICINE: Age 30; Baroda, 1974; seeking practice in specialty, group or solo. Available July 1980. LW-110179.

...

FAMILY PRACTICE: Age 51; Cornell University, 1954, American Board Certified; seeking practice in single specialty group, research or institutionally based. Available July 1980. LW-20020.

...

FAMILY PRACTICE: Age 47, University of Alabama, 1957; American Board Certified; seeking place in multi-specialty group, single specialty group, partnership or solo. Available immediately. LW-18574.

...

FAMILY PRACTICE: University of Mississippi, 1978, seeking affiliation with a group practice in a moderate sized community greater than 10-15,000 population. Presently a second year family practice resident. LW-070279.

...

FAMILY PRACTICE: Age 50; Athens, Greece, 1955; seeking practice in general, industrial, or institutional in proximity to Mobile, Montgomery or Birmingham. Available 4-6 weeks from date of agreement. LW-071079.

...

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 30; Washington University, 1975, American Board Certified; National Board Certified, will be American Board Eligible in 1981; seeking practice in single specialty group, partnership or multi-specialty group. Available July 1980. LW-20317.

...

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; Mysore, 1970; American Board Certified; will be American Board Eligible in 1980; seeking practice in multi-specialty group, solo, or single specialty group. Available July 1980. LW-19589.

...

GENERAL PRACTICE: Age 33; UAB, 1975; seeking general practice near TVA or Gulf Coast vicinity in a town with a population of 2,500-75,000. Available July-August 1980. LW-071179.

...

GENERAL PRACTICE: Age 26; McGill, 1977; National Board Certified; seeking practice in institutionally based, multispecialty group or emergency room. Available immediately. LW-18968.

...

INTERNAL MEDICINE: Age 33; Louisiana State, 1976; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group or partnership. Available October 1980. LW-20306.

...

INTERNAL MEDICINE: Age 32; South Carolina, 1973; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, or partnership. Available February 1980. LW-19765.

...

INTERNAL MEDICINE/EMERGENCY MEDICINE: Age 33; Tulane, 1971; American Board Certified;

American Board Eligible; seeking practice in institutionally based, multi-specialty group, partnership, research, administrative or emergency room. Available January 1980. LW-19886.

...

PEDIATRICS: Age 31, Downstate Medical College, 1972; American Board Certified; seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110779 (See LW-11087)

...

RADIOLOGY: Age 32; University of Alabama, 1973; American Board Certified; seeking practice in single specialty group, partnership or institutionally based. Available July 1980. LW-17661

...

SURGERY, GENERAL: Age 31, University of Alabama, 1974, American Board Eligible, 1980; seeking practice in single specialty group, partnership or solo. Available August 1980. LW-18156.

...

SURGERY, GENERAL: Age 30; University of Alabama, 1974; seeking a surgical partnership or group practice, however will also consider exceptional opportunities in solo practice. Available July 1980. LW-070779.

## PHYSICIANS WANTED (Opportunities for Practice)

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478

...

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

...

GENERAL PRACTICE & O.B.—Opportunity for a general practitioner who will deliver babies. 67 bed hospital is accredited, now has 150 deliveries per year. Town is located in northwestern section of the state; population 5,000 plus 10,000 trade area. Nice, modern office space available. PW-066179.

...

PEDIATRICIAN—Wanted to join Board Certified, established practicing pediatrician with extensive practice in general pediatrics, pediatric allergy, consulting pediatrics. Outstanding geographic, economic and professional opportunity. Minimal night & weekend work due to cooperative arrangements. PW-100479.

...

### OPPORTUNITIES FOR GENERAL PRACTITIONERS

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago;

SURGERY, GENERAL: Age 32; Downstate Medical College, 1972; American Board Eligible; seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110879. (See LW-110779)

...

SURGERY, GENERAL: Age 30; Tennessee, 1974; American Board Eligible in July 1980; seeking practice in specialty, assistant or associate in a town with a population of 10,000 plus. Available July 1980. LW-110979

...

SURGERY, GENERAL: Age 31, University of Tennessee, 1974; will be American Board Eligible in 1980. LW-111079

...

SURGERY, GENERAL: Age 30; University of Alabama, 1974, National Board Certified; will be American Board Eligible in 1980; seeking practice in partnership, single specialty group or institutionally based. Available July 1980. LW-20307

...

SURGERY, GENERAL: Age 32; Meharry, 1971; seeking practice in multi-specialty group, partnership or industrial. Available June 1980. LW-21209.

equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178

...

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic area provided by residents of the family practice residency training program on a rotation basis. The clinic is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

...

Opportunity for general practice in the second largest town in a Southeast Alabama community that includes a trade area of 4,000 population located a short distance from the Gulf of Mexico and one of the largest lakes in the state. The median age of the population is 27.7 years and 38 per cent of the population is below age 18. Town had a physician in recent years when the physician died. One dentist is located in the town. Principal source of income of the community is agriculture or agriculturally-related businesses. There are 10 churches, 2 schools, public and private; 2 modern banks. A multi-purpose recreational park has just been completed which includes two tennis courts and softball and baseball fields. Office space available at the community health center clinic now under construction. Nearest hospital located eight miles away in metropolitan center of 50,000 plus population. PW-110179.

# Auxiliary



Mrs. Eugene H. Bradley  
President, A-MASA

## Chicago *My Kind of Town*

I am beginning to think of Chicago as my second home.

I do enjoy the Drake Hotel and Chicago. But the purpose of my visits to Chicago and the Drake are to learn more about our AMA Auxiliary and conferences that will be of benefit to our State Auxiliary.

The Confluence held in Chicago during October was for all State Presidents, State President-elects, and six County President-elects.

This was primarily a leadership conference, hopefully to help us prepare for our next year of service as a volunteer leader in AMASA.

Attending this Confluence from Alabama with me were Mrs. Ben Johnson, Jr., Bessemer, AMA Auxiliary President; Mrs. George Scofield, Birmingham, National Chairman of Health Projects Committee, Mrs. O. B. Carr, Jr., Sylacauga, President-elect AMASA; and President-elects of these county auxiliaries—Mrs. Billy Mosley, Mobile; Mrs. John Kimbrough, Montgomery-Autauga; Mrs. Sam Crawford, Calhoun; Mrs. Roland Murphree, Blount; Mrs. John Maloof, Jefferson-Birmingham; Mrs. W. W. White, Cherokee; and Mrs. Art Stamler, Morgan-Lawrence.

This was strictly a working meeting. We even had speakers at each

meal, including breakfast. The mealtime speakers were: Mr. James P. Low, President, American Society of Association Executives; Mr. Russell G. Miller, Certified Professional Parliamentarian; Dr. Hoyt Gardner, AMA President; and Dr. James Sammons, AMA Executive Director, who discussed Issues Facing American Medicine.

Now we also had Seminars to help enlighten and inform us: Food For Fitness, Health Maintenance, Hospice Care, Marijuana and Children, Mid-Life Stress, Safety on the Streets, Spouse Abuse and Youth Suicide. I will pass some information on to you in later articles about some of these seminars.

Another part of this confluence that was most helpful was dividing into groups according to the size of your county auxiliary. This is great for exchange of ideas; it seems that most of us have the same problems. While the county president-elects were in this meeting, the state president-elect and I were meeting with others from the Southern Region for an exchange of ideas.

We also had four Leadership Seminars on these subjects: The Art of People Persuasion; Management of Time, Arrangements and Planning

of Meetings; and Speak Up—The Articulate Woman.

Mrs. Ben Johnson presided at all sessions and Mrs. George Scofield conducted the Food For Fitness seminar. As the case will be this year, all eyes were certainly on Alabama and we knew we had the stars that would brightly shine in Chicago.

I do hope I haven't bored you with the details of this Confluence but it is very important and could be attended only by auxiliaries whose husbands are members of the AMA. AMA Auxiliary reimbursed our participants for their air transportation (tourist class, naturally) and AMASA reimbursed us with \$100 each to help out on the hotel bill and the registration fee.

This by no means covered all the expenses but it certainly did go a long way enabling us to attend, and for this we are most grateful.

Doctor, if you don't belong to AMA you are missing something and that spouse in your house might just miss a great trip to Chicago!

Thank you for your time in reading this page. Our Auxiliary is so honored to be given this page. I do hope my articles are worthy of your page in the *Journal* and especially your time.

*Ann*

Pres.-Elect Mrs. O. B. Carr, Jr.; First Vice-Pres. Mrs. Rufus Lee; District Vice-Pres. NW Ralph Braund; NE Mrs. Andrew Brown; SW Mrs. Clifford Pringle, Jr.; SE Mrs. William Lazenby; Rec. Sec. Mrs. Wallace Frierson; Treas. Mrs. Robert Estock.



# For recurrent attacks of urinary tract infection in women

## Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

### Just one tablet b.i.d. for 10 to 14 days



- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications and Usage:** For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

**Also for the treatment of documented *Pneumocystis carinii* pneumonitis.** To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (Federal Register, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

**Warnings:** Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

**Urinary Tract Infections:** Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

**Supplied:** Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

Her next attack of cystitis may require

# the Bactrim<sup>TM</sup>

## 3-system counterattack



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of

Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introcolonization by fecal uropathogens. It has no significant effect on other normal, necessary intestinal flora.

## Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.



# JOURNAL

of the Medical Association of the State of Alabama

DECEMBER, 1979

*MDS, vol. 49 #6*



22ND ST. ABOVE CHESTNUT  
PHILADELPHIA, PA 19103

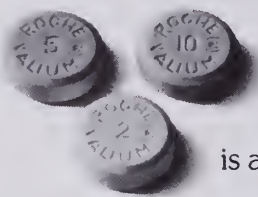
## The Collectors

An Alabama psychiatrist takes a long look at collecting, showing its historic roots and references in literature, with views of the reasons people collect things, some of them strange.

IAN 18 1980



# A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own.

Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

## Valium® diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets  
a prudent choice in psychic  
tension and anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. **Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d. alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed, adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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ABOUT THE COVER

J. B. Shaw, retired salesman living in Montgomery, looks over a few of the thousands of miniature horses and wagons he has collected since his sister gave him the first one for Christmas 1933 in Wyoming. His huge collection has over-  
flowed a barn-like structure built for it behind his home. He  
often works with a neighbor, L. M. Tew, who joined him in  
the pursuit 14 years ago, specializing in wagon construction.  
The psychology of collecting in all its forms, some bizarre, is  
discussed on page 23 by Birmingham psychiatrist Henry  
Spira, M.D.

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**Illustrations:** Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct, drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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## From the Executive Director

### Cloudy Crystal Ball

One of the first things we all learn by the time we have bade fond farewell to our 30s is that prophecy is the frailest of human gifts.

The temptation is great as the old year winds down to look ahead and guess at what 1980 holds, in the vain notion that we have the foggiest idea beyond what we read in the papers. It will be years, in fact, before this year, 1979, is identified, analyzed and fixed in the current of history. For one thing, we have no way of knowing how things will turn out that had their roots in 1979 or in some earlier year.

But since everyone is trying to tell you what to expect next year—and indeed what to expect in the 1980s—I'll take the plunge too, but only to the extent of agreed upon certainties that might be extrapolated.

This election year will be a fateful one for the American people. The pundits agree on that if they agree on nothing else. And almost everyone predicts that President Carter and Senator Kennedy will cut each other up in the primaries, like the Gingham Dog and the Callico Cat. Some even say the Democratic Party may not survive the internecine war that they see on the horizon.

The particular interest of physicians in this internal fight is that the symbolic bone of contention between these clashing adversaries is National Health Insurance.

Senator Kennedy charges that the President has turned his back on the mainstream of the party as it has existed at least since the New Deal; that he reneged on his own 1976 campaign promise to make NHI a top priority item of his administration; and that the bill he did finally introduce is an inadequate, token offering.

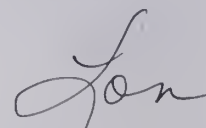
The President has responded that Kennedy's welfare state NHI bill would bankrupt the nation. And so on.

There are many other issues between them, of course, but this is point at which their differences, fiscal as well as philosophical, are so starkly spotlighted. Medicine may expect to receive some of the fallout from their cannonading.

The Republican battle for the nomination is also a horse race, suggesting that the candidates offered by both parties will meet in a real donnybrook after the national conventions next summer.

Who will be the next President? I promise to have that information in my column one year hence, since it will be written in mid-November 1980. I sent my prophet's mantle to the cleaners about 20 years ago and forgot to return for it.

Season's greeting from the MASA staff.



S. Lon Conner





Luther L. Hill, M.D., President

# 25 Centuries of CME

Continuing Medical Education is not a recent concept. Consider the many, many medical periodicals, meetings, postgraduate courses, postgraduate medical schools, and audiodigest releases which have been available for years. Medical teaching can be traced back to the 5th century B.C.—to Hippocrates of Cos and his medical school under the olive trees.

What is new is the requirement to document a certain specific number of hours within a specific period of time. Penalties for neglecting to meet this requirement vary from loss of license to expulsion from a medical organization.

Within Alabama, this requirement has been tied to continued membership in MASA as the result of a vote by the College of Counsellors and House of Delegates in 1975. Since that time the Council on Medical Education has been working steadily to aid members in meeting this requirement.

Margaret Klapper, M.D. of Birmingham chairs the Council. Drs. Martin Putnoi, Birmingham; D. Joseph Judge, Anniston; T. Riley Lumpkin, University; and H. C. Mullins, Jr., Mobile, are members.

At an all-day meeting in Birmingham on August 29, the Council started work on the CME program for the 1980 annual session. Generally, about nine hours of Category I CME are planned for the Annual Session. Add to this, the nine hours offered in our regional CME programs, and you can see that most of the annual Category I requirement can be met through MASA-sponsored activities. Other

special programs are also offered from time to time.

The Council is very much concerned about the time and expense involved in gaining CME credits, and in addition to the MASA programs is encouraging local hospitals and societies to seek accreditation for their CME efforts. In this way, members should be able to get most of their CME locally with minimum time and expense.

It is more than likely that most Association members could easily qualify for their CME requirement, but it will not be possible to do this if he or she waits until the deadline to try, because the credits must be documented. To aid in this, the MASA Education Department recently mailed a CME records folder to each member.

Be smart. Start now and organize your CME records.

\* \* \*

*As the Christmas season approaches, I am reminded that the Christian world celebrates Christ's Birthday with love for their fellowman, with compassion for the afflicted and with a desire to be helpful.*

*These are the same motives that caused you as young men and women to choose medicine as your vocation.*

*Think about this and have a pleasant holiday.*

*Luther Hill*

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**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlordiazepoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: *CNS:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. *G.I.:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride *Lederle*.

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# Why Can't Our Town Find a Doctor?

by James H. Campbell, Ph.D.

Director, Office of Physician Placement Services, University of Alabama in Birmingham School of Medicine

Since the end of WWII few physicians each year have gone into practice in settings that could be called "rural," or in patterns that could be called "primary care."

For example: Although the population of physicians increased between 1970 and 1975 by 53,360, during that same period the number of physicians in general practice decreased by 4,469 while the number of physicians in the medical specialties increased by 10,536, and in the surgical specialties by 8,390.<sup>1</sup> If the length of the period of interest

is from 1966 to 1977, the number of physicians increases by 117,515 while those in general practice decreased by 18,978. In medical specialties and surgical specialties the increases are, respectively, 21,862 and 18,077 physicians.<sup>2</sup>

That trend recently has begun to reverse. Part of the reversal is attributable to the expenditure of federal dollars in support of medical education programs that gave promise of reversing the trend. Part of the trend reversal also is attributable to the increase, beginning several years ago, in the number of medical students in the United States, with the result that more students have become interested in General Internal Medicine, Family Medicine and Pediatrics.

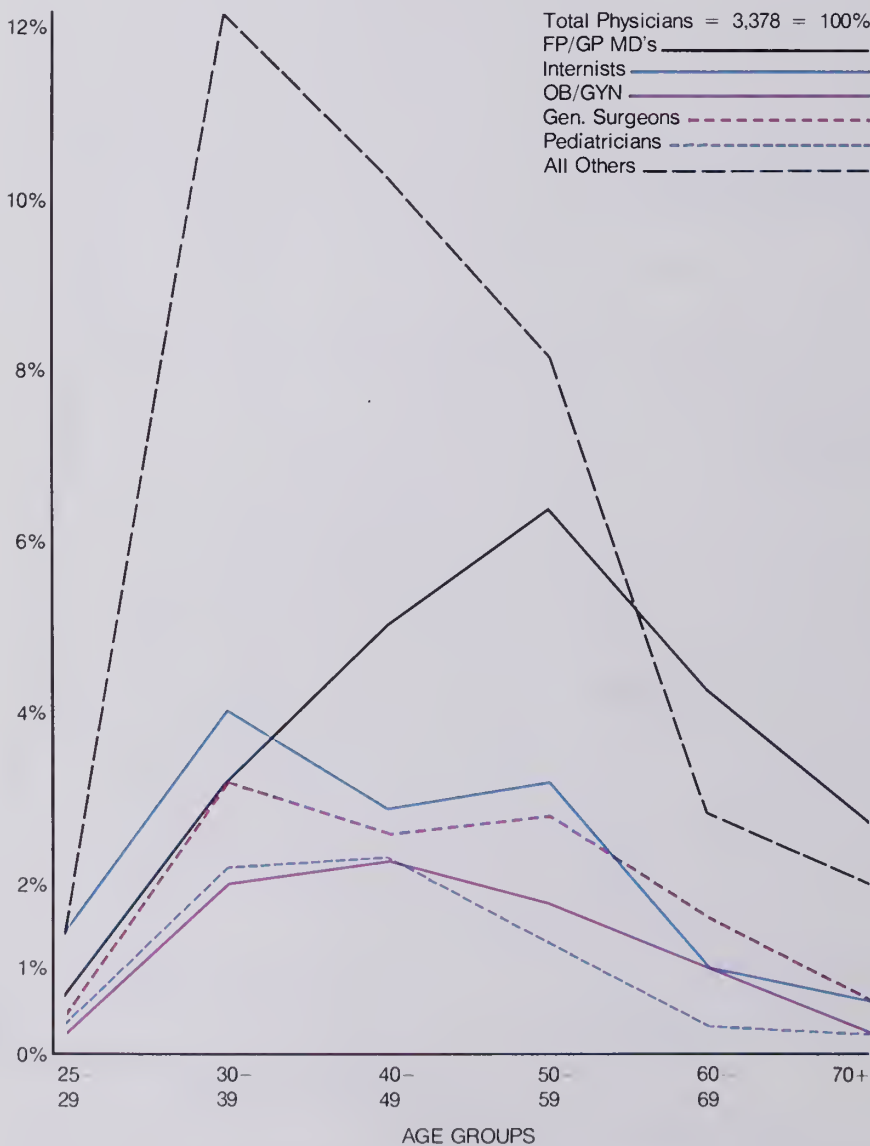
With the promise of a higher proportion of General Internists, Pediatricians, and Family Practitioners in the population of physicians, Alabama's cities, towns and communities have begun to think more positively about recruiting a physician; typically, in the case of the smaller communities, to replace a physician who had practiced there until his death or retirement sometime within the past 5 or 10 years. Public notice given the establishment of Family Practice Residency Programs around the state contributed to the expectation on the part of Alabama's communities and institutions that they could now find a physician. Physicians already in practice formed the same expectation. Occasionally, the enthusiasm of a commercial physician-recruiter may have added to this expectation that soon, very soon, there would be not only a chicken in every pot, and two cars in every garage, but a doctor in every town, hamlet and crossroads in the state.

Some Alabama communities are recruiting successfully—more successfully than in the earlier half of this decade. But there are still many communities who want and need more physicians or, at least, a physician.

There are several reasons why some communities will continue to develop needs for physicians. One of the more important is that the physician population in practice, in solo practices especially, in the

Figure #1

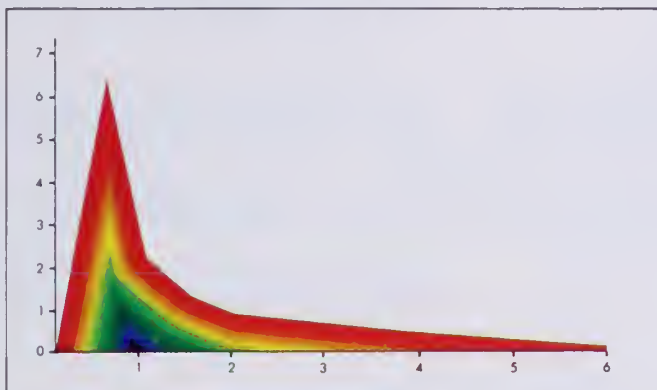
PERCENTAGES OF PHYSICIANS WITHIN AGE GROUPS BY SPECIALTIES  
ALABAMA—1975



Alabama Health Data Systems Project, Alabama CHP, September 15, 1975.

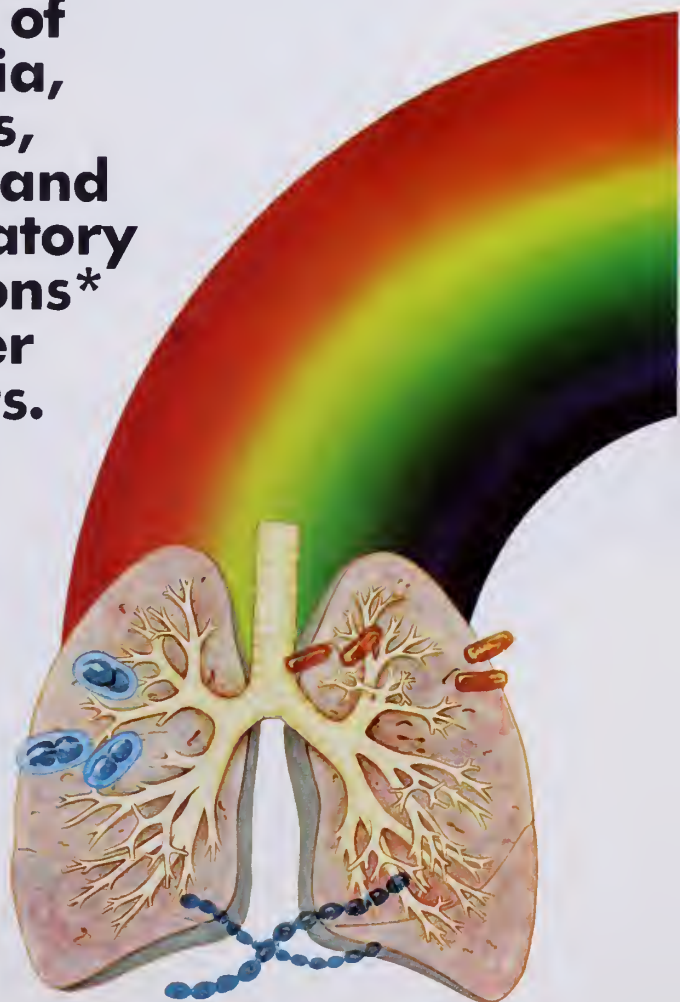
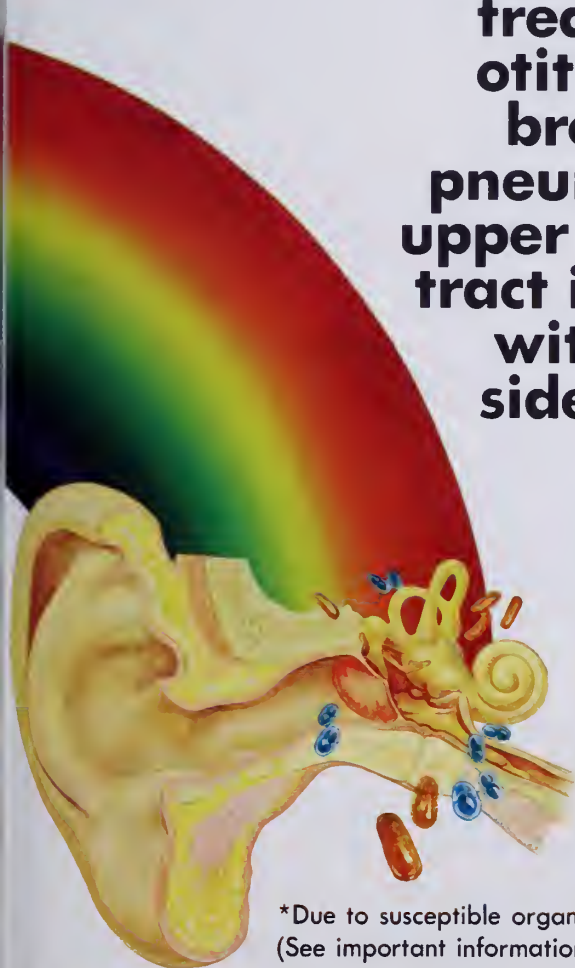


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\*Due to susceptible organisms  
(See important information on last page.)

# New **CYCLAPEN**<sup>®</sup> (cyclacillin) Tablets/ Suspension

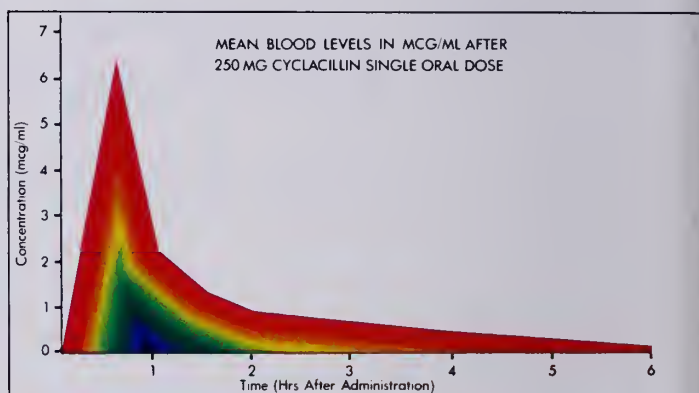
## efficacy with fewer side effects than ampicillin confirmed in studies of 2,581

Rapid, virtually complete  
absorption from GI tract

Rapid onset of action—  
mean peak serum levels  
within 30 minutes

Exceptionally high peak  
blood levels—3 times  
greater than ampicillin  
(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



Clinical efficacy of CYCLAPEN<sup>®</sup> in otitis media<sup>†</sup>

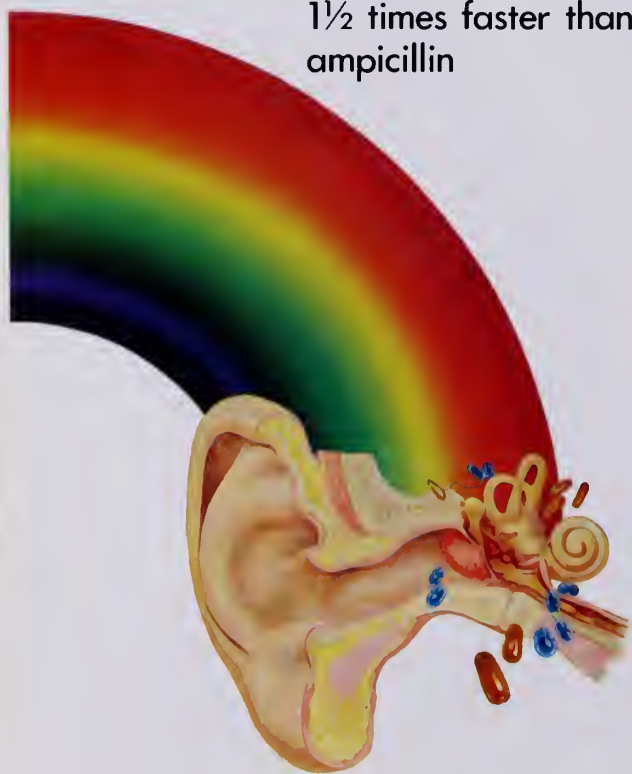
Causative Organism			No. of Patients
<i>S. pneumoniae</i>	96		82
	95		
<i>H. influenzae</i>	88		96
	85		
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>			

## more than just spectrum in otitis media

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.

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# effects than double-blind patients\*

fewer side effects with CYCLAPEN<sup>®</sup> in  
double-blind studies to date<sup>1,2</sup>

Total number of drug-related side effects in all patients	
CYCLAPEN <sup>®</sup>	128 of 1,286 (10%) of patients
ampicillin	202 of 1,129 (18%) of patients
Difference statistically significant ( $P < 0.001$ )	

## CYCLAPEN<sup>®</sup> (cyclacillin)

Effective for otitis media<sup>†</sup> in children

- Excellent clinical results in eliminating the two most common causative organisms in otitis media
- Significantly lower incidence of diarrhea and skin rash in children treated with CYCLAPEN<sup>®</sup> Suspension

	diarrhea	rash
CYCLAPEN	9.1%	2.1%
ampicillin	19.2%	5.8%
	$P < 0.001$	$P < 0.03$

1. Gold JA, Hegarty CP, Deitch MW, Walker BR: Double-blind clinical trials of oral cyclacillin and ampicillin, *Antimicrob Ag Chemother* 15:55-58, (Jan.) 1979.

2. Data on file, Wyeth Laboratories.

(See important information on next page.)



## In bronchitis, pneumonia and upper respiratory tract infections<sup>†</sup>

High cure rate with CYCLAPEN®		
Causative Organism	Bronchitis/Pneumonia†	No. of Patients
<i>S. pneumoniae</i>	100	73
	95	
Chronic Bronchitis† (acute exacerbation)		
<i>H. influenzae</i>	92	12
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>	
Streptococcal Sore Throat†		
Group A beta-hemolytic Streptococcus	100	44
	86	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Erodication</div>		

more than  
just spectrum  
**CYCLAPEN<sup>®</sup>**  
(cyclacillin) Tablets/  
Suspension

**Wyeth Laboratories**  
Philadelphia, Pa 19101



New from Wyeth Laboratories

**CYCLAPEN<sup>®</sup>**  
(cyclacillin) Tablets/  
Suspension



## more than just spectrum in otitis media, bronchitis, pneumonia, and upper respiratory tract infections\*

- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes

- Exceptionally high peak blood levels—3 times greater than ampicillin (clinical efficacy may not always correlate with blood levels)

- Rapidly excreted unchanged in the urine—1½ times faster than ampicillin

- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date

- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients

- New CYCLAPEN<sup>®</sup> Suspension—great-tasting raspberry punch flavor

\*Due to susceptible organisms.

### How Supplied CYCLAPEN<sup>®</sup> (cyclacillin) tablets: 250 mg scored tablets 500 mg scored tablets

#### Indications

Cyclapen<sup>®</sup> (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below.

Cyclapen<sup>®</sup> is indicated for the treatment of the following infections:

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci. Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *O. pneumoniae*).

Otitis Media caused by *S. pneumoniae* (formerly *O. pneumoniae*) and *H. influenzae*.

Acute exacerbation of chronic bronchitis caused by *H. influenzae*.\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

**SKIN AND SKIN STRUCTURES** (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers. **URINARY TRACT INFECTIONS** caused by *E. coli* and *P. mirabilis* (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections.)

**NOTE:** Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing.

#### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins.

#### Warnings

CYCLACILLIN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT.

CYCLACILLIN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS. SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN. ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN BEFORE THERAPY WITH A PENICILLIN. CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED.

#### Precautions

Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy appropriate measures should be taken.

**PREGNANCY:** Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**NURSING MOTHERS:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman.

#### Adverse Reactions

The oral administration of cyclacillin is generally well tolerated.

As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

Usual children's dosage: 50 to 100 mg/kg/day in equally spaced doses, depending on severity.

**CYCLAPEN<sup>®</sup> (cyclacillin) for oral suspension**  
125 mg per 5 ml:  
100 ml and 200 ml bottles  
250 mg per 5 ml:  
100 ml and 200 ml bottles

hypersensitivity to penicillins or in those with a history of allergy, asthma, hay fever, or urticaria.

The following adverse reactions have been reported with the use of cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS.)

Other less frequent adverse reactions which may occur and that have been reported during therapy with other penicillins are: anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia, and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

#### Dosage and Administration

INFECTION*	ADULTS	CHILDREN
		Dosage should not result in a dose higher than that for adults.
Respiratory Tract Infections & Pharyngitis**	250 mg q.i.d. in equally spaced doses	body weight <20 kg (44 lbs) 125 mg q.i.d. in equally spaced doses body weight >20 kg (44 lbs) 250 mg q.i.d. in equally spaced doses
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d. in equally spaced doses	50 mg/kg/day q.i.d. in equally spaced doses
Chronic Infections	500 mg q.i.d. in equally spaced doses	100 mg/kg/day q.i.d. in equally spaced doses
Otitis Media	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Skin & Skin Structures	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Urinary Tract	500 mg q.i.d. in equally spaced doses	100 mg/kg/day in equally spaced doses

\*As with antibiotic therapy generally, treatment should be continued for minimum of 48 to 72 hours after the patient becomes asymptomatic or until evidence of bacterial eradication has been obtained.

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum 10 days of treatment is recommended to guard against the risk of rheumat fever or glomerulonephritis.

In the treatment of chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and may be required for several months afterwards.

Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

**Patients with Renal Failure:** Based on a dosage of 500 mg q.i.d., the following adjustment in dosage interval is recommended:

Patients with a creatinine clearance of >50 ml/min need no dosage interval adjustment.

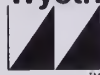
Patients with a creatinine clearance of 30-50 ml/min should receive 1 dose every 12 hours.

Patients with a creatinine clearance of between 15-30 ml/min should receive full doses every 18 hours.

Patients with a creatinine clearance of between 10-15 ml/min should receive full doses every 24 hours.

In patients with a creatinine clearance of <10 ml/min, serum creatinine values of >10 mg % serum cyclacillin levels are recommended to determine both subsequent dosage and frequency.

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smaller communities is getting old. The result is that more of that group are leaving practice each year than would be the case if younger physicians had taken up such practices during each of the years since the

In Alabama we have done several things that are beginning to bear fruit. The state Legislature funded the establishment and operation of clinical branches of the University of Alabama School of Medicine now

Medical Association. The Alabama Hospital Association is also active in assisting Alabama communities and hospitals in finding physicians. One of the clinical branches of UASMEP, the College of Community Health Science at Tuscaloosa, has an office of Physician Placement, as well.

And the final activity to which this article will call attention is the establishment of an Office of Physician Placement Services adjunct to the Office of the Dean of the School of Medicine several years ago. This office has four activities worth noting here.

First is the collection and maintenance of files on: (a) communities or institutions needing physicians and; (b) physicians who are interested in entering practice in Alabama.

Second is the annual Physicians Opportunity Fair (POF) at which representatives from Alabama communities and institutions seeking physicians have a chance to meet and talk with residents/house staff around the state. Third is the publication of a booklet titled: *Practice Opportunities in Alabama*. The first edition of this booklet was published mid-summer of this year. It was mailed to residency programs and others around the United States who were thought to be interested in learning of practices available in Alabama.

Fourth, and last, a new publication, now in preparation, will go to physicians in the state and will contain information and news of practice opportunities in Alabama. This publication, titled "Physician Placement Services Bulletin," will appear three times a year, Fall, Winter, and Spring.

Footnotes

1. Haug, J.N., G.A. Roback, and B.C. Martin, Distribution of Physicians in the United States, 1970, Center for Health Services Research and Development, American Medical Association, Chicago, 1971, Table H, p. 9; and Goodman, Louis J., Physician Distribution and Medical Licensure in the U.S., 1975, Part 1, Center for Health Services Research and Development, American Medical Association, Chicago, 1976, Table H, p. 17.  
2. Theodore, C.N., G.E. Sutter, and E.A. Jokiel, Distribution of Physicians, Hospitals, and Hospital Beds in the U.S., 1966, Volume 1, Management Services Division, American Medical Association, Chicago, 1967, Table K, p. 17; and Physician Distribution and Medical Licensure in the U.S., 1977, Dept. of Statistical Analysis, Center for Health Services Research and Development, American Medical Assn., Chicago, 1979, Table H, p. 29.

Table #1  
DISTRIBUTION OF GRADUATES  
OF ALABAMA FAMILY PRACTICE RESIDENCY PROGRAMS (AS OF SEPT. 1979)

Now practicing in:

Program	Alabama		Other States		Military & Other	Program Total
	Population of Place X < 25,000	X ≥ 25,000	Population of Place X < 25,000	X ≥ 25,000		
Huntsville	10	6	9	2	2	29
Tuscaloosa	10	5	8	3	3	29
Anniston	1	1	0	0	0	2

Sources: The offices of the Directors of the programs

end of WWII. For this reason alone, it seems likely that the deficit in numbers of physicians interested in such practice settings will not be large enough to satisfy all the demand for at least 5 years. Probably longer than that will be required for supply to catch up with demand.

For several years physicians, who were citizens of other countries, came to the U.S. to finish their training, and remained to practice. Many of these sought a rural practice setting. Circumstances have changed, as a consequence of changes in federal policy, and will reduce sharply the numbers of such physicians entering practice in the U.S. in years to come. This, too, is a reason the supply of physicians interested in becoming primary care physicians may not be adequate to our need for the next few years.

The situation resembles that of a man and wife who've lived in a four room house for 10 years, and have been blessed with a child each year. After 10 years they begin to feel crowded but can only afford, then, to build one room each subsequent year. It will be several years before space available allows them to be comfortable again, even after construction of rooms is in full swing. In fact, they are likely to be most frustrated during this time, since now the promise of space has become tangible, while, for a time, conditions in the house remain very much as before.

also known as, when taken together with its clinical branches, the University of Alabama System Medical Education Program (UASMEP). UASMEP, which has been in existence since 1972, operates under the Chancellor of the University of Alabama System. An Assistant to the Chancellor and Director of UASMEP recently has been appointed, who is also Vice-President for Health Affairs of the University of Alabama in Birmingham. The Director of UASMEP delegates major administrative responsibilities to the Executive Dean of UASMEP.

The state also has funded the development of residency training programs in Family Practice, and, more recently, a program in General Internal Medicine in Montgomery. These programs are only now beginning to produce physicians whose entrance into practice in Alabama undoubtedly will alter the need patterns which have emerged over the past quarter century.

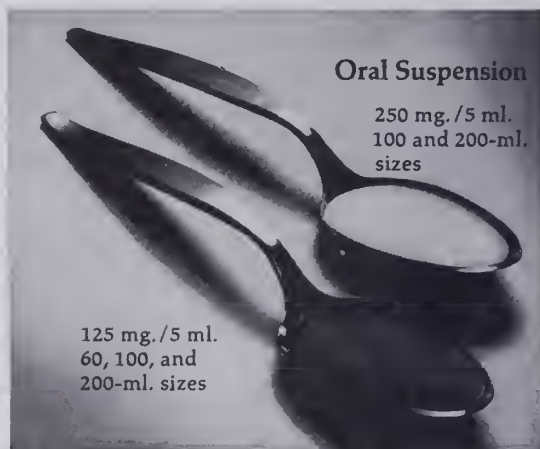
The presence of the Family Practice Residency Program and of the Department of Family Medicine in the Medical Center, of which the School of Medicine is a major component, will also affect the career choices of the men and women studying medicine in Birmingham.

Other agencies that might be mentioned as providing brokerages of practices and physicians include the American Medical Association's services, and those of our own state

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If you slept well during the summer of 1958, two of the reasons may be in this picture.

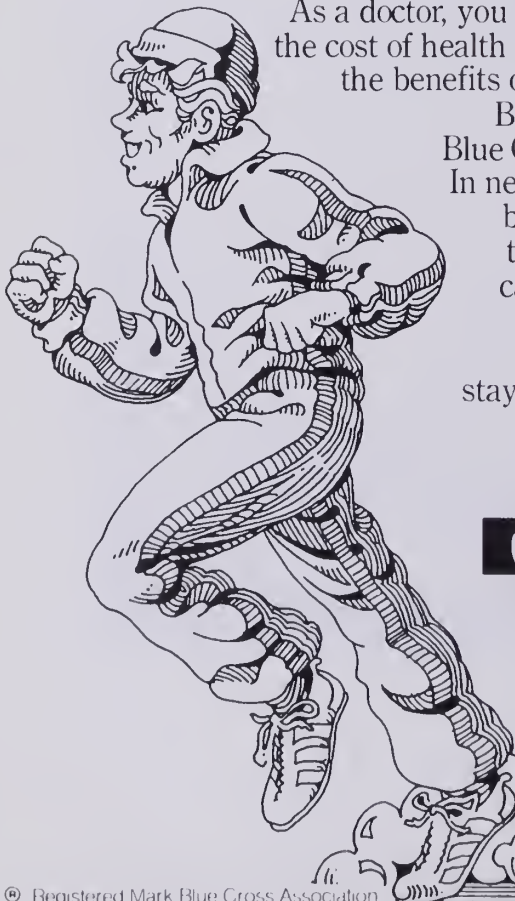
History does not record just what mission was being discussed here but we have it on highly impeachable authority that never in this state have so many owed so much to just two.

Who are these warriors and where are they now?

The scene was summer national guard camp, 1958, with Sp 2c A. Derrill Crowe, (left) and Sp 2c Kenneth C. Yohn of the 152d Transportation Gp. Hq. contemplating a map. The summer ended, both entered medical school and graduated in 1962. Drs. Yohn and Crowe now serve on the Board of Censors. Dr. Yohn is in general practice in Eufaula; Dr. Crowe in urology, Birmingham.



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# Should the F.T.C. Be Reined?

*(Reprinted from The New York Times)*

By A.O. SULZBERGER, Jr.

WASHINGTON—It seems always to be a step out of sync with the mood of the nation.

But recharged by new laws and new leadership in the early and mid-1970s, the commission thrust itself into the forefront of regulation. Head held high, it marched straight into the antiregulation America of the late 1970s.

Now the agency is facing the strongest attack on its powers since its creation 65 years ago. The battle has focused on the merits of various rules and regulations proposed by the commission and on measures to curb the body, specifically a Congressional veto of its actions.

But at the heart of the debate are these questions: Has the F.T.C. overstepped its authority and taken from Congress the role of making, as opposed to implementing, policy? And, if so, what can be done about it?

## The Background

Like Dr. Frankenstein, Congress is battling its own creation.

When it gave life to the agency in 1914, Congress charged it with fighting unfair and deceptive practices in the marketplace. It was a broad mandate, far broader than that given other independent agencies. And its very terms, most especially "unfair," led to various interpretations.

In 1975, Congress passed a bill sending new waves of energy through

the commission, dramatically increasing its power. Called the Magnuson-Moss Act, the law enabled the commission to set industrywide standards of behavior. No longer did the F.T.C. have to take on one company at a time. Now it had the authority to make rules that affected broad economic interest groups.

The public response to this new power is perhaps best told by Michael Pertschuk, the once outspoken but increasingly subdued chairman of the commission. Opponents cite him as an exemplification of the commission's

excess of zeal. He tells the story of being stopped by a friendly senator last year who said: "You've done a wonderful thing. You've set about alienating all the leading citizens of my state."

Since 1975, the commission has instituted 20 proceedings to regulate the practices of businesses as diverse as mobile homes, companies that make over-the-counter drugs, funeral parlors, children's advertising on television, used-car sales and makers of hearing aids.

## Two Views of the Federal Trade Commission

### OPPOSITION

The central argument against the commission is that it has gone too far, that rulings by the F.T.C.'s unelected commissioners reach across the entire spectrum of American business life, and have the same impact as laws passed by Congress. That argument is increasingly persuasive because some members of Congress feel that the Federal bureaucracy is slipping beyond the control of Congress. In addition, business groups complain that F.T.C. regulations burden consumers with needless costs—at a time the country can least afford them.

### SUPPORT

Supporters of the F.T.C. contend that it is getting into trouble for doing its job too well, that the commission is being made a whipping boy for any group encumbered by Federal regulation. Its supporters are willing to acknowledge that the commission has brought upon itself some of the criticism by attempting too much, too fast. They argue, however, that regulation is always controversial when it is done well. That fact, combined with the awesome political power of business and trade associations, spells trouble for the F.T.C.

All but three of these proceedings were started before Mr. Pertschuk became chairman at the outset of the Carter Administration. Thousand of businessmen and professionals in towns across America suddenly found themselves under scrutiny by a Federal agency. The response, for whatever reason, was an intense and increasingly coordinated campaign against the commission.

Congressional hearings were instituted; bills were introduced. And in mid-September the House committee responsible for funding the commission forced the issue to a head. Since 1977 Congress has by passed the normal process for funding the agency because the House of Representatives has demanded a Congressional veto provision that the Senate opposes.

But this year the House said "enough," and passed a bill giving the commission money to keep it running into November, but no later. The temporary measure also forbids the commission from beginning or ending any of its Magnuson-Moss trade rules. Thus, Congress has to decide whether to impose a legislative veto, or some other restraint, on the F.T.C. or risk seeing the agency's funds dry up.

The veto proposal most often considered would allow either house of Congress 60 days to adopt a resolution of disapproval of any rule made by the commission. If the other body did not override the veto in 30 days, the rule would be nullified in whole or in part.

### Against the Commission

The heart of the argument against the commission is that it has gone too far; that the rulings of four—usually five, but one seat is vacant—unelected commissioners are having the same impact as the laws passed by Congress, reaching across the entire spectrum of American business life. These arguments have become increasingly persuasive when made to a Congress that feels the bureaucracy is getting out of its control.

While admitting that Congress gave the commission a very general mandate, Senator Harrison H. Schmitt argues that it has nonetheless overstepped its power by not looking to Congress. The New Mexico Republican, a major proponent of the legislative veto, says there are specific cases

where Congress clearly indicated its own feelings but the commission acted contrary to them. Among the examples he gives are the commission's investigation into standards and certifications and into whether the oil companies should divest themselves of their pipelines.

Members of Congress and lobbyists also charge that the commission has abused its subpoena powers, using them to "satisfy a curiosity." Business also complains that the regulations add needless costs at a time the country can least afford them.

### For the Commission

Supporters of the commission contend that it is doing exactly what it has been mandated by Congress to do and that it is in difficulty for doing its job too well. Now the commission's supporters feel that it has been made a whipping boy for any group encumbered by Federal regulation.

Mr. Pertschuk, in a spirited defense of his agency during an October hearing, said: "The record demonstrates that the commission is carrying out the intent of Congress with judiciousness and restraint."

However, Mr. Pertschuk and other supporters concede that some of the charges leveled against the agency are valid. "Some of the proposed rules were not adequately thought out in the rule-making stage," he said in an interview. "Our economic analysis was not adequate, and the remedies were not thought out."

"To a certain extent, the F.T.C. has brought upon itself some of this heat," Representative Toby Moffett, a Connecticut Democrat, said. "They've done too much, too fast, and it has not been well orchestrated."

"But," he added, "regulation is inherently controversial when it is done well. Combine that with the awesome political power of the business trade associations and it spells intense heat on the commission."

One of the more remarkable aspects of the battle has been the ineffectiveness of the consumer lobby, which, as Senator Howard M. Metzenbaum, an Ohio Democrat, put it, has done "doodley-squat."

Senator Metzenbaum summed up his feelings and that of many others on

the issue in a recent speech: "This action, if successful, will say to the F.T.C., 'leave the monopolies alone, forget the price gougers, never mind the misleading advertising...go back into your shell and leave the American people to their own devices.' We cannot stand for that."

### The Outlook

"Congress is like a puppy," James P. Carty, a lobbyist for the National Association of Manufacturers, observed. "You can get its attention for five seconds with a ball, and then you lose it. We've now got the five seconds."

Having grabbed attention with the bouncing ball of grass-roots complaints, lobbyists hope Congress will respond the way Senator George S. McGovern has. The South Dakota Democrat, who for many epitomizes liberal sentiment, has come out in favor of a veto proposal.

While Congress has passed more than 200 legislative veto provisions in the last 50 years, none have ever applied to all regulations promulgated by a single agency. But because of its vulnerability, the Commission is seen as ideal for instituting a legislative veto that then might be extended to other agencies.

The House has supported a veto proposal three times and is expected to do so again. The Senate is expected to be the deciding body. Some expect the Senate to try to fashion an attractive package of oversight and other measures that do not include a veto. But the House is also expected to stick to its version, with the veto.

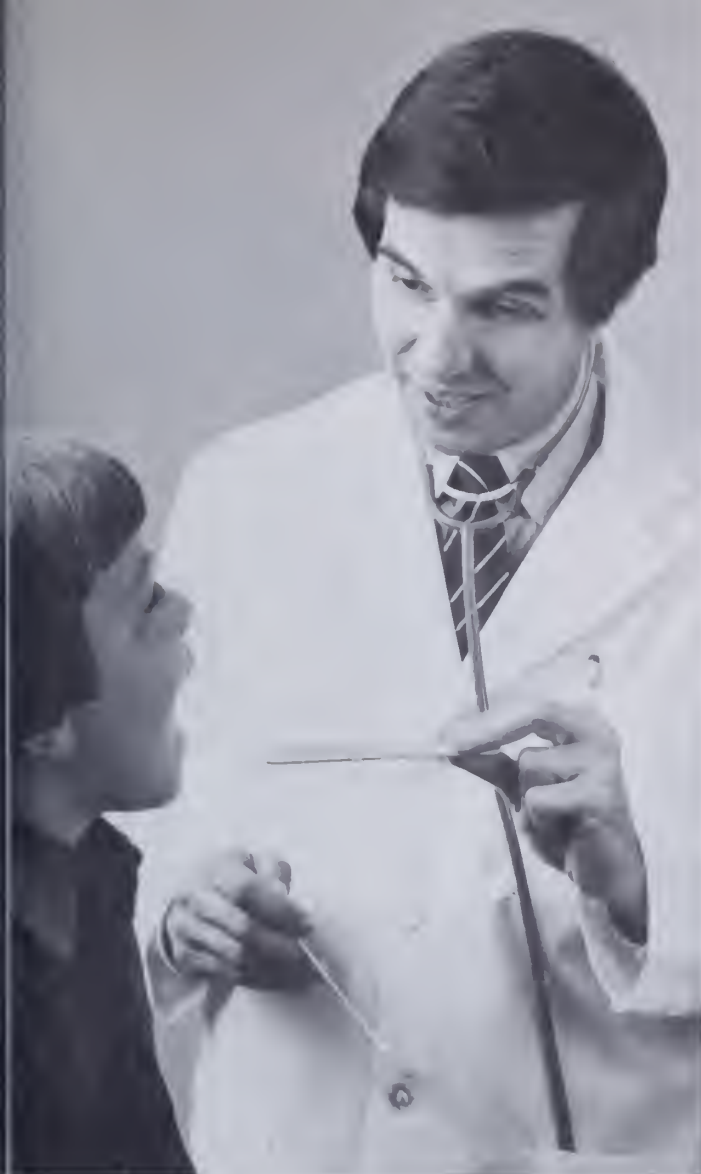
Senator Metzenbaum and some others, noting that Congress rarely lets programs go out of business, predicts it will extend the time frame as long as the issue is being worked on.

Mr. Pertschuk expects that "substantial flesh" will be "cut out of our carcass," but greatly opposes any change in the subpoena powers the commission has enjoyed for 60 years.

And at the end of the legislative road is the specter of a Presidential veto, which has been threatened, of any action that would greatly curb the commission.

In response, Senator Schmitt warns that, if President Carter vetoes what Congress agrees to, there is a chance "he won't have any F.T.C. at all."





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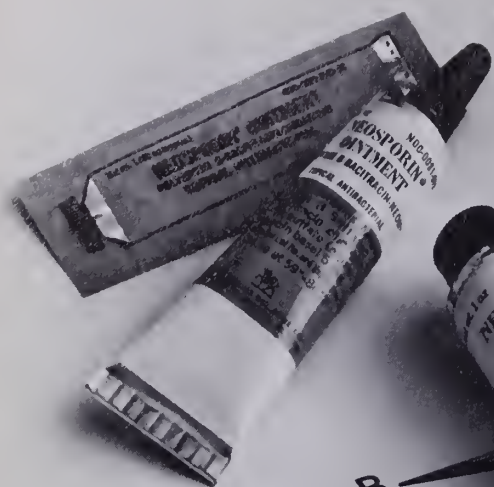
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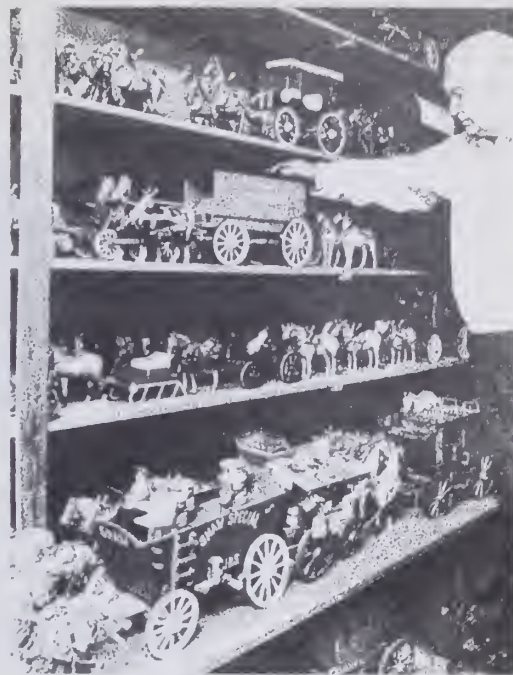


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# COLLECTORS are Happy CREATURES

Henry Spira, M.D.



In his short story, "The Invisible Collection," Stefan Zweig attributes the above maxim to Goethe. Collecting has had a universal appeal from times immemorial; thus, the devotees of this hobby must indeed derive some happiness from it.

It is the purpose of this paper to show that this happiness is gained through the fulfillment of basic human needs and drives. A brief look at the personality of the collector and the nature of his hobby may reveal some of the psychologic benefits he obtains from it.

There are some indications that a spontaneous, perhaps inborn, element exists in collecting. Some animals—the magpie and the packrat are familiar examples—collect (hoard, we say condescendingly) objects for which they have no ascertainable use.

Small children do likewise. As they grow up, their parents often hope that an activity such as stamp or coin collecting will prove to be an educational aide to their offspring, but the educational value or usefulness of the collected objects are almost always a strictly secondary consideration for the true collector. Nor is he usually much concerned about their intrinsic worth.

An exception is, of course, the social climber who acquires expensive merchandise to impress or emulate his peers; or the financier who accumulates things of value, such as works of art, for the purpose of investment or—*horribile dictu*—"appreciation." Attaining their financial aims must give them a measure of satisfaction; but it will be shown that these aims cannot bear comparison with those of the real collector, such as the little boy attempting to assemble a complete collection of streetcar transfers, matchbooks, or miniature cars.

Related to the phenomenon of snobbism are also certain advertising techniques through which conveyors of goods offer to the well-to-do what they term a collection of, say, furs or jewelry which is nothing more than an array of their wares.

The most obvious and most humble purpose of this, as well as of any other, hobby is that of keeping pleasantly occupied, of relieving boredom and turning one's attention away from a preoccupation with our daily cares, the type of activity the psychiatrist calls externalization of interests.

Perhaps Thoreau exaggerated when he said that the mass of men lead lives of quiet desperation. Yet, a stultifying routine does take up the bulk of many lives. Beyond this, ruminating about the past, present, and future is quite characteristic of many patients of neurotic temperament, who are often self-centered and self-absorbed individuals. Even on its most modest level, collecting deflects from this preoccupation with the self and gives meaningful content to leisure, thereby becoming a therapeutic instrument, for which, moreover, no prescription is required.



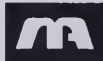

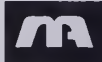


## The Miser In Literature

In many instances, those who grew up in poverty are unable to feel secure, regardless of their success later in life. An extreme example is the miser, who in a narrow sense is a collector of sorts who can never overcome his early feelings of insecurity and overcompensates by scraping worldly goods together, frequently leading an absurdly penurious life in addition.

A classical example in literature is Balzac's Old Grandet, the wealthy miser who sacrifices everything to his passion and remains obsessed by it



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even in his hour of death, when he asks that his gold coins be spread out before him. In a wider sense, however, all collectors derive a feeling of stability and security from their pursuits. The owner of a collection of children's toys stated with much insight: "Having toys around all the time gives me a feeling of security that I missed when, as a boy, my own Christmases were toyless."<sup>2</sup>

Collectors experience the hobby as a "security blanket" in other ways as well, through the familiarity and routine of their collecting activities; the knowledge that they have complete mastery and control over the collection; and through their striving toward ever greater perfection in completing it.

This striving toward perfection is one of the basic attributes of the so-called compulsive personality, characterized by predilection for hard work, orderliness, cleanliness and, as noted, perfectionism. Such personality characteristics are often found in the inveterate collector.

The compulsive person exhibits to a high degree a desire to possess, retain, and accumulate, and this is thought to date back to influences in his early childhood development. Compulsivity creates the irresistible urge of owning a complete collection; but what appeals to this type of collector most of all is the challenge of attempting to complete it, in many cases an insurmountable task. As a French psychiatrist put it poetically: "Never completely satisfied, (this passion) constantly revives desire in the heart of him who possesses it, and is not desire the very essence of life?"<sup>3</sup>

### Physicians as Collectors

It is worth noting that the majority of physicians have some compulsive personality features since these are required for the strenuous and goal-directed activities without which they cannot succeed in their profession. This helps to explain why physicians are among the most enthusiastic collectors, and more will be said about this later.

It is tempting to speculate whether yet other attributes of the personality are characteristic for the collector, and how they influence the nature of his collecting activities. For instance, an impressive collection may give the owner a feeling of pride and power and compensate for feelings of inferiority, whether reality-based or not. The choice of a hobby must reflect in other ways as well on the hobbyist's personality, as much as the choice of a profession or more so since the selection of a hobby is often a more voluntary act.

Common sense indicates that the collector of guns is likely to be more aggressively inclined than

the collector of buttons, or else that his collection serves as a reaction formation against his perceived lack of strength or courage. It would certainly be of great interest to analyze the unconscious motivations of collectors of such diverse objects as pieces of barbed wire and pacifiers; fertility symbols and butterflies; Samurai swords and bubble gum wrappers, to mention a few among hundreds. Is it possible that the latent alcoholic sublimates his consciously rejected desires by collecting (full) bottles of miniatures, or that unconsciously he is trying to prove to himself that no such temptation exists? Or that the timid and passive collector of toy soldiers may satisfy his urge to command an army? Many a collector must find happiness in similar ways, by acting out his consciously unrecognized impulses, wishes and conflicts.

### Medical Collecting

Retracing our steps and considering for a moment the common motivations leading to the choice of a profession and of a hobby, it is not surprising to find that physicians are often interested also in medical aspects of collecting, sometimes in their specialties. Physicians' journals contain requests from collectors for old medical instruments, medical prints, textbooks, stamps of medical interest, and so on.

Dr. Walter Alvarez, always interested in psychiatry, collected autobiographical books by former mental patients. A dermatologist, Dr. Norman Goldstein, has prepared a collection of tattoo pictures.<sup>4</sup> To mention another example of particular fascination for the psychiatrist, Freud was an avid collector of antiquities and compared the psychoanalytic process with the excavation of the hidden structures which he was so fond of collecting.<sup>5</sup>

The above shows that the most creative person may also be an enthusiastic collector. Yet, in a discussion of what personality attributes influence the collector, it should likewise be pointed out that collecting can serve occasionally as a substitute for creativity. One may not be able to draw or write, but one can accumulate etchings or rare books; one may be a mediocre chess player but collect an array of chess sets; a poor athlete, but collect baseball cards; not be able to carry a tune, but have a fine record collection.

Such collections may be a tacit, often subconscious, admission that if one cannot create anything new, he can admire, enjoy, and possess what others have created. Edison's famous dictum notwithstanding, the true genius is not usually a compulsive person. There is a great deal of difference between discovering an antibiotic and writing a

comprehensive statistical review of its applications, between creating and collecting.

If not a genius, the collector may still aspire to being unique by virtue of his collection. This desire to be distinct and different from one's fellows is a very basic drive in human beings. Who has not heard the expression, enounced with quiet pride, "I'm a funny fellow, I . . .", this followed by a claim to some inconsequential behavioral or characterologic distinction?

To quote Goethe once again, "The highest happiness of earth's children is only the personality." Even if he lacks uniqueness in other respects, the collector may rightly believe that his singular treasures confer a certain preeminence upon him, that he is someone special because he possesses something special, acquired through his own vigorous efforts.

The more unusual and rare the objects of his interest, the more do they set him aside from the common herd, even if they have little objective value, serve no useful purpose, and may even expose him to ridicule. Listen to a collector of old oil rags: "All the time, I know I've done something no one else has. It's important for a man to accomplish something. For me, it's collecting oil rags."<sup>2</sup>

And to mention another collector, whose collection carries even less of a risk of duplication: There was a man once in New York City—and he may still be working on his collection—who traveled on the subway many hours every day and ceaselessly noted down every conversation within earshot. Whatever purpose he had in mind, uniqueness must have been one of his goals. Many a collector, as a matter of fact, has lost all interest on hearing that a collection similar to his own or more complete was in existence, which deprived him of the fulfillment of his ambition to be different or to surpass his fellows in just this one endeavor. Obviously, this is one hobby where competition and rivalry are not unknown.

So far, little has been said about collecting which would go beyond accepted limits of normal human behavior. Collecting fever, however, has its psychopathologic aspects as well. One might first of all mention the curious habit observed in some persons who forget to return what they borrowed from the other person's collection, frequently a book.

This could still be considered a relatively passive type of behavior, but there are also those whose extreme acquisitive drives can lead to aggressiveness and even crime. Difficulty in obtaining the desired object only sharpens their hunting instinct. Autograph hunters especially have a reputation of sometimes carrying their efforts to

extremes, using undue persistence or devious tricks to obtain that precious signature. Much worse, crimes have been committed by the collecting addict as well as the drug addict.

Again, literature provides a classic example. Flaubert has written a short story, "Bibliomanie," about a Barcelona bookseller who murders the owner of a rare book he covets and commits other crimes due to this "mania for books."<sup>6</sup> When his lawyer shows in court another copy of a Bible for which the bookseller-collector committed murder, thinking that it was the only copy of this Bible in Spain, he tears the book to pieces: "You lied! I told you there was only one copy in Spain." This strikingly dramatizes the collector's craving for uniqueness.

Doctor Lauzier tells of a Barcelona bookseller who in 1850 murdered several people in order to recover rare books the victims had bought from him; which would seem to indicate that Flaubert's story is based upon historical fact.<sup>3</sup> He also writes about ancient Rome, "the true fatherland of the collector," whose generals and proconsuls despoiled conquered provinces, especially a certain Verres who as proconsul of Sicily amassed treasures by rather unorthodox means. A true collector to the last, he refused to surrender some of his bronzes to the mighty Antony, thereby losing his life: "Preferring his works of art to life itself, he showed how highly he valued them."<sup>3</sup>

Some of us have lived through enough history not to have to go back to antiquity, and to remember the Nazi murderers and brigands who plundered Europe and acquired great art and other "collections" from their victims. Robbing, of course, is not collecting. However, one could give many examples to prove that addiction to collecting can lead to disregard of the law just as much as addiction to alcohol and drugs, demonstrating further that the collector may be under obsessive-compulsive or other severe emotional pressures. Such pressures may be even of a sexual nature if one wants to include the fetishist, who is sometimes a collector of sorts.

### Sic Transit Gloria

Whether he acquired his possessions legally or otherwise, the owner has to decide with whom to share them during his lifetime and after his death. He will again act according to his personality and established behavior patterns. Most collectors will want their contemporaries and heirs to enjoy their treasures; but in others, the drive to guard and control is so strong that they hide them from their closest friends. Many a collector builds up his collection as much for the future as for himself.



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due to susceptible strains of staphylococci and/or streptococci...

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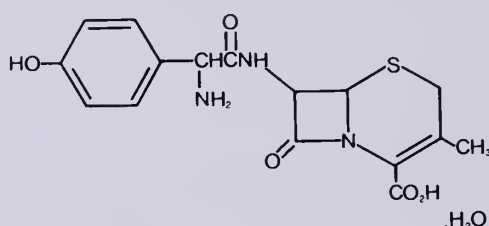
# DURICEF<sup>®</sup>

## (CEFADROXIL MONOHYDRATE)

### References:

1. Data on file, Mead Johnson Pharmaceutical Division.
2. Gatley MS: To be taken as directed. *J Roy Coll Gen Pract* 16:39, 1968.

**DESCRIPTION:** DURICEF<sup>®</sup> (cefadroxil monohydrate) is a semisynthetic cephalosporin antibiotic intended for oral administration. It is a white to yellowish-white crystalline powder. It is soluble in water and it is acid-stable. It is chemically designated as 7-[[D-2-amino-2-(4-hydroxyphenyl)acetyl]amino]-3-methyl-8-oxo-5-thia-1-azabicyclo [4.2.0]oct-2-ene-2-carboxylic acid monohydrate. It has the following structural formula:



**Clinical Pharmacology**—DURICEF (cefadroxil monohydrate) is rapidly absorbed after oral administration. Following single doses of 500 and 1000 mg., average peak serum concentrations were approximately 16 and 28 mcg./ml., respectively. Measurable levels were present 12 hours after administration. Over 90 percent of the drug is excreted unchanged in the urine within eight hours. Peak urine concentrations are approximately 1800 mcg./ml. during the period following a single 500 mg. oral dose. Increases in dosage generally produce a proportionate increase in DURICEF urinary concentration. The urine antibiotic concentration, following a 1 gm. dose, was maintained well above the MIC of susceptible urinary pathogens for 20 to 22 hours.

**MICROBIOLOGY:** *In vitro* tests demonstrate that the cephalosporins are bactericidal because of their inhibition of cell-wall synthesis. DURICEF is active against the following organisms *in vitro*:

*Beta-hemolytic streptococci*  
*Staphylococci*, including coagulase-positive, coagulase-negative, and penicillinase-producing strains  
*Streptococcus (Diplococcus) pneumoniae*  
*Escherichia coli*  
*Proteus mirabilis*  
*Klebsiella* species

**Note**—Most strains of *Enterococci* (*Streptococcus faecalis* and *S. faecium*) are resistant to DURICEF. It is not active against most strains of *Enterobacter* species, *P. morganii*, and *P. vulgaris*. It has no activity against *Pseudomonas* or *Herella* species.

**Disc Susceptibility Tests**—Quantitative methods that require measurement of zone diameters give the most precise estimates of antibiotic susceptibility. One recommended procedure (CFR Section 460.1) uses cephalosporin class disc for testing susceptibility; interpretations correlate zone diameters of the disc test with MIC values for DURICEF. With this procedure, a report from the laboratory of "resistant" indicates that the infecting organism is not likely to respond to therapy. A report of "intermediate susceptibility" suggests that the organism would be susceptible if the infection is confined to the urinary tract, as DURICEF produces high antibiotic levels in the urine.

**INDICATIONS:** DURICEF (cefadroxil monohydrate) is indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Urinary tract infections caused by *E. coli*, *P. mirabilis*, and *Klebsiella* species  
 Skin and skin structure infections caused by staphylococci and/or streptococci

**Note**—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

**CONTRAINDICATION:** DURICEF (cefadroxil monohydrate) is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

**WARNING: IN PENICILLIN-ALLERGIC PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE USED WITH GREAT CAUTION. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES OF PATIENTS WHO HAVE HAD REACTIONS TO BOTH DRUGS (INCLUDING FATAL ANAPHYLAXIS AFTER PARENTERAL USE.)**

Any patient who has demonstrated a history of some form of allergy, particularly to drugs, should receive antibiotics cautiously and then only when absolutely necessary. No exception should be made with regard to DURICEF (cefadroxil monohydrate).

**PRECAUTIONS:** Patients should be followed carefully so that any side-effect or unusual manifestations of drug idiosyncrasy may be detected. If a hypersensitivity reaction occurs, the drug should be discontinued and the patient treated with the usual agents (e.g., epinephrine or other pressor amines, antihistamines or corticosteroids).

DURICEF (cefadroxil monohydrate) should be used with caution in the presence of markedly impaired renal function (creatinine clearance rate of less than 5 ml/min/1.73M<sup>2</sup>). (See Dosage and Administration.) In patients with known suspected renal impairment, careful clinical observation and appropriate laboratory studies should be made prior to and during therapy.

Prolonged use of DURICEF may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

**USAGE IN PREGNANCY:** Although no teratogenic or anti-fertility effects were seen in reproductive studies in mice and rats receiving dosages greater than the normal human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

**ADVERSE REACTIONS:** Gastrointestinal—The most frequent side-effect has been nausea. It was infrequently severe enough to warrant cessation of therapy. Administration with food decreases nausea and does not decrease absorption. Diarrhea and dysuria have also occurred.

**Hypersensitivity—Allergies** (in the form of rash, urticaria, and angioedema) have been observed. These reactions usually subsided upon discontinuation of the drug.

Other reactions have included genital pruritus, genital moniliasis, vaginitis, and moderate transient neutropenia.

**DOSAGE AND ADMINISTRATION:** DURICEF (cefadroxil monohydrate) is acid stable and may be administered orally without regard to meals. Administration with food may be helpful in diminishing potential gastrointestinal complaint occasionally associated with oral cephalosporin therapy.

**Adults**—For urinary tract infections the usual adult dosage is one gm. (two 500 mg. capsules) two times per day. For skin and skin structure infections the usual dose is 500 mg. two times per day or 1 gm. once a day.

In patients with renal impairment, the dosage of cefadroxil should be adjusted according to creatinine clearance rates to prevent drug accumulation. The following schedule is suggested. In adults, the initial dose is 1 gm. of DURICEF (cefadroxil monohydrate) and the maintenance dose (based on the creatinine clearance rate [ml/min/1.73M<sup>2</sup>]) is 500 mg. at the time intervals listed below.

Creatinine Clearances	Dosage Interval
0-10 ml/min	36 hours
10-25 ml/min	24 hours
25-50 ml/min	12 hours

Patients with creatinine clearance rates over 50 ml/min may be treated as if they were patients having normal renal function.

**Children**—Dosage and safety have not yet been established in children.

**HOW SUPPLIED:** DURICEF<sup>®</sup> (cefadroxil monohydrate) capsules 500 mg. for oral administration in an opaque maroon cap and opaque white body No. 0 has gelatin capsule. On each half capsule printed in black is "MJ" and "500." Available in bottles of 24 capsules (NDC 0087-0784-41) and 100 capsules (NDC 0087-0784-42).

U.S. Patent Re. 29,164

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Immortality is one of the most fundamental human concerns, and especially in the case of significant collections, it must be on the collector's mind, in the sense of lasting fame. If he opens his house to the public or endows a wing of a museum—perhaps with his name in block letters over the entrance—he is surely guided, consciously or unconsciously, by the deep-seated aspiration of *non omnis moriar*—I shall not wholly die. Something of permanence which he has assembled, whether this is a houseful of sculpture or every obtainable copy of the Rubaiyat, is likely to survive him.

Yet, others stipulate that their collections be auctioned off after their death. A famous French collector, Edmond de Goncourt, gave a reason for this which shows the esoteric spirit of the collector at its finest. He wrote that it was his will that his collections, "the happiness of my life, shall not experience the cold tomb of a museum and the stupid gaze of the indifferent passer-by," but be auctioned off so that "the delight which the acquisition of each one of them has provided for me, be given again, for each one of them, to an heir of my tastes."<sup>3</sup>

Only a brother in the select fraternity of collectors is worthy to inherit from the other. There must be other reasons as well for an auction after death: financial ones; a belief that one's heirs would not show proper appreciation; perhaps even a measure of jealous possessiveness extending beyond life's end. Conceivably, a person might even be possessive enough to begrudge posterity what was so much part of his own life and personality, and destroy his collection intentionally.

### That Word

Collecting appears to be on the increase recently, especially that of older objects, antiques as they are called. Naturally, old objects are often distinguished by their rarity. It is very much part of human nature to prefer what is rare to what is common, and this makes antique "collectibles" (an ugly word of recent vintage) more attractive. There may be, however, other factors of importance here, for instance the longing (nostalgia, if you wish) for individuality in the object and its maker, in a time of machine-made things and of people who are anonymous and indifferent producers of mass-manufactured wares. Also, the man of today, more and more a number to be fed into a computer, may identify, through the possession let us say of pieces of period furniture, with their previous owner and with a time when individuality stood in higher regard.

The psychiatrist learns early in his practice that human behavior is multiply determined, that is, numerous causative factors are involved in what we are, think, and do. This holds also for the passion of collecting, and one may now briefly summarize some of the varied and often multiple psychologic reasons why collectors collect and why they are, indeed, happy creatures.

Collecting is probably to some extent an inborn characteristic. It appeals especially to the compulsive, "anal" personality, in psychoanalytic parlance those who are thought to become fixed at an early stage of their development, when anal contents become endowed in the young child's mind with the idea of something precious, to be retained.

Beyond this, collecting provides gratification for some of our drives. The toddler collects pebbles; the President, stamps; the miser, gold; the *nouveau riche*, old masters; the Don Juan, sexual conquests. Obviously they all have different motivations.

The collector may seek only pleasurable activity or security, he may acquire a feeling of power through his collection, act out urges of his unconscious, or he may compensate for the dullness of his existence or for shortcomings in his personality. He may satisfy his hunting instinct or substitute for his lack of creativity.

### The Happy Addict

Perhaps most importantly, in a world where everything is fragmentary, incomplete, and imperfect, where our accomplishments rarely match our ambitions, the most modest collection places completeness, perfection, a perfect whole or series, within our reach, and this is a result of our individual efforts.

It bestows upon its collector the distinction of being a unique individual instead of being just a member of the crowd. It may even lead to lasting fame.

Small wonder that the collector, like the gambler and the alcoholic, may regardless of his original motivation become the victim of a true addiction. What distinguishes him from other addicts, however, is that he is a happy addict.

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# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**CARDIOLOGY/INTERNAL MEDICINE** Age 30, Baroda, 1974; seeking practice in specialty, group or solo. Available July 1980. LW-110179.

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**FAMILY PRACTICE** Age 51, Cornell University, 1954. American Board Certified; seeking practice in single specialty group, research or institutionally based. Available July 1980. LW-20020.

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**FAMILY PRACTICE** Age 47; University of Alabama, 1957. American Board Certified, seeking place in multi-specialty group, single specialty group, partnership or solo. Available immediately. LW-18574.

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**GASTROENTEROLOGY/INTERNAL MEDICINE** Age 30; Washington University, 1975. American Board Certified; National Board Certified, will be American Board Eligible in 1981; seeking practice in single specialty group, partnership or multi-specialty group. Available July 1980. LW-20317.

...

**GASTROENTEROLOGY/INTERNAL MEDICINE** Age 31; Mysore, 1970; American Board Certified, will be American Board Eligible in 1980; seeking practice in multi-specialty group, solo, or single specialty group. Available July 1980. LW-19589.

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**GENERAL PRACTICE** Age 33; UAB, 1975; seeking general practice near TVA or Gulf Coast vicinity in a town with a population of 2,500-75,000. Available July-August 1980. LW-071179.

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**INTERNAL MEDICINE** Age 33; Louisiana State, 1976; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group or partnership. Available October 1980. LW-20306.

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**INTERNAL MEDICINE** Age 32; South Carolina, 1973; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, or partnership. Available February 1980. LW-19765.

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**INTERNAL MEDICINE/EMERGENCY MEDICINE** Age 33; Tulane, 1971; American Board Certified; American Board Eligible; seeking practice in institutionally based, multi-specialty group, partnership, research, administrative or emergency room. Available January 1980. LW-19886.

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**INTERNAL MEDICINE/PULMONARY** Age 35; Prince of Wales, 1969; American Board Certified; seeking practice in general, specialty, associate or institutional in a town with a population of 10,000 plus. Available July 1980. LW-11029.

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**NEUROLOGY** Age 41; Medical College of Calicut, 1965; seeking practice in specialty, group, multi-specialty group or institutional in a medium sized

town preferably in Tuscaloosa, Jasper, Ft Payne or Prattville. Available September 1980. LW-100279.

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**NEUROLOGY** Age 35; San Marcos, Peru, 1970; Will be American Board Eligible in 1980; seeking practice in specialty, assistant or associate and institutional in a town with a population of 30,000-40,000. Available July 1980. LW-120179.

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**OBSTETRICS AND GYNECOLOGY** Age 33. University of Texas, 1973; American Board Eligible; seeking practice in single specialty group, multi-specialty group or partnership. Available August 1980. LW-21032.

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**OBSTETRICS AND GYNECOLOGY** Age 29, B. J. Medical College, 1972; seeking practice in specialty, assistant or associate, or multi-specialty group in a town with a population of 10,000 or more. Available July 1980. LW-110379.

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**OBSTETRICS AND GYNECOLOGY** Age 30; Chonnam University, 1973; seeking practice in specialty in a medium sized town. Available July 1980. LW-110479.

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**OPHTHALMOLOGY** Age 32; Kansas, 1974; American Board Eligible in 1980; seeking practice in

partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

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**PATHOLOGY** Age 37, Meharry, 1974; will be American Board Eligible in 1980; seeking practice in specialty, assistant or associate, institutional or group HMO preferably in the southern area near Mobile with a population greater than 10,000. Available July 1980. LW-110579. (See LW-110679)

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**PEDIATRICIAN** Age 29; University of Alabama, 1975, National Board Certified; American Board Certified, seeking practice in single specialty group, multi-specialty group, and/or partnership in a medium-sized or larger town, preferably between 20,000 to 80,000 population. Available November 1980. LW-120279.

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**PEDIATRICS** Age 31, University of Arizona, 1975; American Board Eligible; seeking practice in specialty, institutional or group HMO in the southern area near Mobile. Available July 1980. LW-110679. (See LW-110579)

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**SURGERY, GENERAL** Age 30; Tennessee, 1974; American Board Eligible in July 1980; seeking practice in specialty, assistant or associate in a town with a population of 10,000 plus. Available July 1980. LW-110979.

## PHYSICIANS WANTED (Opportunities for Practice)

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## OPPORTUNITIES FOR GENERAL PRACTITIONERS

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Opportunity for general practice in the second largest town in a Southeast Alabama community that includes a trade area of 4,000 population located a short distance from the Gulf of Mexico and one of the largest lakes in the state. The median age of the population is 27.7 years and 38 per cent of the population is below age 18. Town had a physician in recent years when the physician died. One dentist is located in the town. Principal source of income of the community is agriculture or agriculturally-related businesses. There are 10 churches; 2 schools, public and private; 2 modern banks. A multi-purpose recreational park has just been completed which includes two tennis courts and softball and baseball fields. Office space available at the community health center clinic now under construction. Nearest hospital located eight miles away in metropolitan center of 50,000 plus population. PW-110179.

# Auxiliary



Mrs. Eugene H. Bradley  
President, A-MASA

## DOCTOR, We Need Your Spouse!

At this particular time I think we are usually in a mood for reminiscing and reflecting on things that have happened during the past year.

Most of us have had a good year in so many ways. Our Auxilians in Mobile and Baldwin Counties say that even though the hurricane did so very much damage, and caused many inconveniences, they still were very thankful that no lives were lost and no serious injuries incurred.

Our Auxiliary has had a very good year, especially in membership. Alabama was the only state that had increased its membership over a period of 12 years. Now our AMA Auxiliary has challenged us to increase our membership by 10%.

We know that the strength of our auxiliary lies in the strength of our membership. Here is where I need your help. Does your spouse belong to the Auxiliary? If so, do you know what the benefits are? If you like these benefits, please ask your spouse to join us for one year and give us a chance to prove ourselves. Some of the benefits of membership in the auxiliary are:

- You have a voice in one of the most constructively involved health organizations in the community.

- You become involved in your community, with your neighbors and other spouses.

- You have an opportunity to share your knowledge and talents with others.

- You are provided information to impact legislation affecting health care and medical practice.

- You receive publications such as *FACETS*, written for and about physicians spouses.

- You are able to share your special concerns with other physicians' spouses who have similar concerns.

- You can extend the work of the physician into the community where it is needed to help keep people healthy.

- You are given a chance to assist medical students, interns, and residents with their schooling and to support scientific and medical research.

These are only some of the tangible benefits of our auxiliary. The friendships that develop are lifetime joys.

We are not "snobs" but we *are* a very exclusive organization. One must be married to a physician to be eligible for membership and that is exactly where you come into the picture. You chose us and we are glad. We are always an extension of you and your

profession. We always want you to be proud of us.

If you live in a county where there is an auxiliary, contact some auxilians and ask who that president is and ask her to contact your spouse. If you will drop me a card I will be happy to put someone in touch with you. If there is no auxiliary in your county, we would love to have your spouse as a Member-at-large. State and national dues are \$11 and may be mailed to me or directly to our Treasurer, Mrs. Robert Estock, 2419 Monte Vista Drive Birmingham, Alabama 35216.

If there is a county auxiliary, the county dues would be in addition to state and national dues. For any information concerning membership please write me at 901 Cedar Bluff Road Centre, Alabama 35960.

Doctor, belonging is important and we want your spouse to know the joy of working together for a happier and healthier world. By developing ourselves through service to others, we begin Developing Our Future—Today.

Doctor, we need your spouse!

My husband and my family join me in wishing you and your family a Merry Christmas and a Happy, Joyful and Healthy New Year.

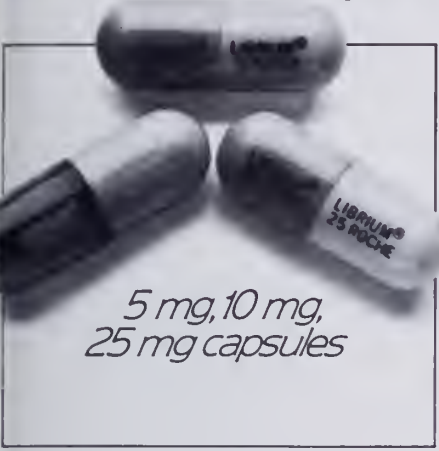
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**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and

acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Usual Daily Dosage:** Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

**Supplied:** Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

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# A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own.

Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

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**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.



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## From the Executive Director

### The Uncertain Trumpet

Leadership is an undefinable quality that has defied both qualitative and quantitative analysis down through the centuries.

All we know, in the end, is that some seem to be born to it, as Shakespeare said, some achieve it and some have it thrust upon them.

Admiral Halsey, during the darkest hours of the Pacific War after Pearl Harbor, was one of those upon whom great leadership was thrust. After the successful turning of the tide, he was given time to ruminate on what leadership meant.

There are no great men, he concluded. There are only ordinary men forced by circumstances in which they find themselves to rise to greatness. He said it more succinctly but that was the substance of his conclusions.

The Leadership Conference Jan. 25-26 is an attempt by the Association to inspire leadership in the membership. It is an attempt to involve physicians at the county society level, the wellspring of organized medicine's policies, in the decision-making process.

To lead well, physicians, like any others called to the role, must be well informed. They must know their enemies' thoughts as thoroughly as any general officer. If this conference works, if it succeeds in its purpose, it is the hope of the Association to make it an annual affair.

Your officers believe that now is the time, if ever, when medicine must rise to the challenges that would destroy it, or perish.

And they believe with I Corinthians XIV, written almost 2,000 years ago:

"If the trumpet give an uncertain sound, who shall prepare himself to the battle?"



S. Lon Conner





Luther L. Hill, M.D.  
President

### Youth Must Be Served

The Medical Association of the State of Alabama collectively feels responsible for the health and welfare of the entire Alabama population. It is also the only group that collectively champions the interest of all physicians.

Our legislative body has been carefully developed to represent geographically all sections of the State. Delegates are allotted to counties on the basis of population in the counties. Counsellors are allotted to Congressional Districts on the basis of physician population in the District.

Geographically, then, the coverage is excellent. There has been no consideration given, however, to providing for the differences in the philosophical concepts of physician members.

Young individuals have ideas, energy and endurance. The older individuals have experience and are more conservative. All of these factors are important. The officers and Counsellors will always be made up of an older group, because they are elected and time is required for an individual to be known and evaluated by his fellow physicians.

There are many young physicians who are anxious to get involved in the affairs of their Association, but to do so is difficult. The Association needs the ideas, the enthusiasm and the drive of these physicians, but there has been no way to harvest these assets.

At the Annual Session in April, we plan to organize a conference of younger physicians. In this way, we hope to tap their God-given resources and the Association is bound to profit there from.

The younger physicians should feel better for making their contribution. They should feel more like being a part of the organization.

At the Annual Session in April, the first conference of young physicians will include organization, examination of the concept, definition of objectives and rules for procedure with, hopefully, discussion among them of a topic of concern to them. Their output should be to the Board of Censors and to the Association at large through MASA publications.

It is anticipated that through these conferences, individuals with outstanding talents and interests will be revealed at a much earlier age. This should permit a much earlier integration of these physicians into positions of committees, councils, boards, and as officers.

The feasibility and preliminary organization will be discussed during the luncheon at the Leadership Conference January 26, 1979. The organizational conference is scheduled for Thursday afternoon, at the Annual Session in April. We hope we will have a large attendance.

*Luther Hill*

EXCERPTS FROM A SPEECH BY

## Dr. Julius Richmond

Assistant Secretary of Health  
and Surgeon General of the  
United States

†*These remarks are taken from an address given by Dr. Julius Richmond at retirement ceremonies last month for Dr. William R. Willard, dean emeritus of The University of Alabama College of Community Health Services.*

In the general scheme of things in this country, there have been a few highly innovative creative developments in medical education in this century. I have noted in my previous writings three:

- The department structure of a medical school, developed at Johns Hopkins in the first decade of this century.
- During the same period and at the same institution, the incorporation of clinical teaching into medical education, using the full resources of a teaching hospital, rather than the more limited resources of a physician-preceptor.
- The curriculum innovations at Western Reserve which shift the departmental structure of the medical school from the vertical, discipline orientation to the more horizontal, cross-cutting task orientation, and *inter-disciplinary* structure, as it were.

Now I think I would have to add a fourth development of striking significance: the incorporation of the behavioral sciences and public health practice by way of a broadened medical school curriculum and community-oriented health sciences center.

For out of that fourth development, building as it does upon the previous three, we are able to move the next step ahead, toward an integrated approach to community health service based upon concepts of prevention and the early detection of disabilities and disease. The future of medicine is no longer centered at the bedside in tertiary care but rather out in the homes and workplaces of the community.

Bill Willard, dean emeritus of The University of Alabama's College of Community Health Sciences,

knew this before many others. He made that knowledge important. He made its study respectable. He made an institution such as the College of Community Health Sciences possible. But you know that much better than I.

From my current perspective, the work of Bill Willard is making some other things possible as well. We have the general knowledge base and the conceptual framework in place to discuss what our country must do next to prevent disease and promote good health. But in order to move ahead, some of us will have to take risks; we will be asked to gamble on the future.

This year we released the Surgeon General's Report on Health Promotion and Disease Prevention. It has a much simpler title: "Healthy People." But the simplicity of the title does not mean the overall tasks are simple. In that report we approached the issues of prevention and health promotion from three perspectives:

- *The health services available* to individuals and communities. These would include the important immunization program, the maternal and child health programs, hypertension screening and control, and other programs and services delivered by putting these personnel and programs into place has been a great national achievement. But now we must try to shape them so that they contribute to the prevention of disease and disability in a coherent way.
- *Programs that control or eliminate danger in the work or home environments.* While these are easy to enumerate, they are difficult to gather together into complementary, mutually supportive relationships. Yet, we know that highway accidents still lead as the cause of death among certain age groups, that occupational health and safety has a direct impact upon adult life-spans; and that the quality of air and drinking water may



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[102175]

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**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdosage. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amitriptyline:** In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Cautions are advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent alone. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonian agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias, heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia, eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea, parotid swelling, black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

**OVERDOSAGE:** All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

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be more critical in some communities than the availability of physicians or emergency medical services.

- *The effects of personal and community lifestyles upon the attainment of good health.* No amount of immunization or water fluoridation will lengthen the life of a heavy smoker. No amount of infant and child health care can reserve the danger done to a fetus by its alcoholic mother. And communities that don't really care about accident prevention will continue to bear the tragic burden of more of its citizens being maimed and crippled for life. Volumes of work yet await to educate individuals and communities on *their* role in prevention and health promotion.

The Surgeon General's report, then, is an attempt to go beyond the sheer cataloguing of health concepts and health services; we tried to see them related to each other and to the larger ideal of a healthier nation.

The report, "Healthy People," represents a "Holistic concept of the patient, his family, and his community." That phrase by the way, comes not from our report but from The University of Alabama's College of Community Health Sciences statement of the purpose of its Clinical Program for Medical Students.

When I read it I was once again struck with the directness and the contemporary sense of the mission of this school, as directed by Bill Willard for the past seven years. To quote again from the statement of purpose, a CCHS graduate should be able to "promote effectively, in individuals and communities, activities contributing to good health as well as the prevention of disease. . ."

I believe that the Surgeon General's Report will be translated into reality and that millions of our fellow citizens will benefit. I feel that way because we know that in Tuscaloosa, with the help of Bill Willard and his dedicated staff, it has already begun to happen.

Of course, the focus here at (The University of Alabama) has not been only on prevention. It has also embraced another issue of great national importance: The need to distribute more equitably—geographically and by specialty—the skills of our new physicians and dentists, nurses, medical social workers, and other health professionals.

The problem of maldistribution cannot be lightly glossed over, as most of you know. Early last month, at a meeting in Chicago, I urged my colleagues in medical education to grapple with "this continuing problem of delivering care to the underserved." I added that this was a problem that federal law and federal agencies could not solve by themselves. It requires an active, creative

partnership between the private and public sectors and among all levels of government: federal, state and local.

Is there reason to be hopeful? I believe there is. The outlines of the answer to the maldistribution problem can be seen in an institution such as the College of Community Health Sciences, which is dedicated to serving the surrounding communities and to sending its graduates out into the underserved areas of the State of Alabama.

This is not expressed here as just a good idea: It is embedded in the basic educational philosophy and policy of this college.

The Family Practice Residency that you have put together here is a model of primary care training—putting the physician out into the community where he or she is most needed, making the physician an invaluable resource that gives to the community in many visible ways.

It works here. It can work nationally. It is a program and the College is an institution to inspire the rest of us to make and to fulfill the promise of better health care for every American.

Editor's Note:

\*Dr. Julius Richmond, Assistant Secretary of Health and Surgeon General of the United States was the guest speaker for the retirement dinner honoring William R. Willard, M.D., Dean Emeritus of The University of Alabama's College of Community Health Sciences. Dr. Richmond addressed the state of health in the nation today. His comments are particularly pertinent to the practice of medicine in the State of Alabama.

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# THE PELLAGRA STORY IN THE U.S.

Emmett B. Carmichael†

## Abstract

Dr. George H. Searcy, Assistant Superintendent, Bryce Hospital for the Alabama Insane, Tuscaloosa, Alabama, while on assignment at the Mount Vernon Hospital, Mount Vernon, Alabama, for colored insane patients reported an epidemic of pellagra during 1906 and he produced the disease experimentally. In the famous Coca-Cola Trial, Chattanooga, Tennessee, in 1911, the Federal Judge, E. T. Sanford, ruled for the defendant and advised that in the future the federal bureaus should be certain of their claims before bringing them to trial.

Following Searcy's discoveries on pellagra, it seems that the U.S. Public Health Service staff members must have decided that pellagra was to be one of the principal diseases to be followed. It also seems that they must have agreed to avoid using any references to Searcy's discoveries on pellagra. This paper points up these observations and illustrates how our federal bureaus with unlimited funds are able to influence the thinking of our citizens and according to the press have performed many illegal acts during the last 30 to 40 years. Because of the turn of events concerning the reporting on pellagra by many members of the U.S. Public Health Service, this paper is being presented in three parts just as Latin Scholars remember from the first sentence in Julius Caesar, "*Gallia est omnis divisa in partes tres,*" that all Gaul is divided into three parts.

## PART I—Epidemic of Pellagra And Experimental Production

Following the U.S. conflict with Spain in 1810, our troops were stationed at the Cantonment, Mount Vernon, Alabama. The Cantonment was converted into a United States arsenal in 1828, and into a barracks in 1873. In 1895, the fortification with its 15-foot brick wall was turned over to the State of Alabama. In 1900, the Fort was renovated, and in 1901, several hundred of the colored insane

patients at the Bryce Hospital for Alabama Insane, Tuscaloosa, were moved to the old Fort. During each of the next few years there appeared a few cases of a disease which seemed to affect the skin of the patients during the summer and early fall months. Usually three or four cases appeared each year and most of them proved fatal. The true nature of the disease was not determined, but it was supposed to be a condition of general debility.

The local staff at Mount Vernon included Dr. E. L. McCafferty, Assistant Superintendent, and Dr. J. H. Somerville.

Dr. George H. Searcy was one of six physicians that accompanied Dr. William Crawford Gorgas when he was assigned to the Panama Canal Project. Dr. Searcy came down with malaria within a few months and returned to Tuscaloosa where he served as Assistant Superintendent of the Bryce Hospital. The Superintendent of the Bryce Hospital requested that Dr. Searcy go to Mount Vernon in 1906 to assist the local staff in studying and controlling the disease that had been affecting several patients each summer. During the summer and early fall months of 1906, there occurred 88 cases of acute pellagra at the Mount Vernon Hospital and 57 of them were fatal. None of the nurses had pellagra and the chief difference in their way of living was in their diet. Actually, the nurses served as controls since they did consume a different diet from the diet fed to the patients.

The disease was characterized by cutaneous lesions of an erythematous-squamous and pigmentary character in one or more locations and was associated with disturbances of the digestive tract and nervous system.

The published reports on the etiology of pellagra from the countries bordering on the Mediterranean Sea seemed to stress the continuous eating of damaged corn, poverty, poor hygienic surroundings, and exposure to the sun's rays as predisposing factors. Since corn products had been incriminated, Dr. Searcy sent a sample of the corn meal used at Mount Vernon to the pathologist in charge of the Laboratory of Plant Pathology, Washington, D.C. The pathologist reported that the corn meal was wholly unfit for human consumption. The various fungi and bacteria found on the

\* This paper was presented at the Fifty-fifth Annual Meeting of the Alabama Academy of Science, Montgomery, Alabama, April 7, 1978.

†Professor Emeritus of Biochemistry, Medical Center, UAB, Birmingham, Alabama, 35294.

corn meal had been incriminated in turn as possible causative agents of pellagra. Dr. Searcy learned that much of the Western corn crop of 1905 was badly damaged by wet weather at harvest time and he suggested that the Federal Government should rule under the Pure Food laws that damaged corn not be used for food purposes.

Dr. Searcy not only described the symptoms, diagnosis, treatment, and etiology of pellagra, but he also produced pellagra experimentally. He reported his findings in the *Transactions of the Medical Association of the State of Alabama* in 1907, and the complete paper appeared in the *Journal of the American Medical Association*, July 6, 1907.

The following quotation from page 391 of the *Alabama Transactions* points up the fact that diet was involved in the production of pellagra.

#### General Considerations

Some interesting points about the Mount Vernon epidemic were as follows:

1. Of the eighty-eight cases only eight were males.
2. The average age was thirty-four.
3. Two-thirds of them had been in the hospital longer than one year. Eighty percent had had fair or good health previously.
4. Of the skin lesions: (a) Eighty-five per cent showed it on the back of the hands and wrists. (b) Thirty-five per cent had it on the dorsal surface of the feet and the same per cent on the back of the neck. (c) Twenty per cent had it on the face, i.e., about the cheeks. (d) Only eight per cent, however, had the skin lesions on all of these locations, and 12 per cent had no skin lesions at all; just the salivation, gastro-intestinal disturbance and nervous symptoms.

No nurses had the disease. They handled the patients, slept in the halls near them, and the chief difference in their way of living was in the diet. They ate little corn bread, mostly flour bread, biscuits, etc., and had a little more variety of diet.

As soon as the nature of the disease was determined and the true cause suspected, the patients were taken off corn bread and grits, and wheat bread and potatoes substituted. The rest of their diet was continued as before. No new cases, except the one in the test case, appeared after about ten days. A set of eight patients was kept on the former diet with corn bread and grits as a test. One of these developed the disease, another began to show symptoms, and all became in such poor general health that their diet was changed also.

Since attention has been called to this disease some four or five cases have been recognized in the Hospital for the Insane at Tuscaloosa. I believe that when it becomes generally known that pellagra may occur in this country we will have more cases reported, especially in the South, where corn bread and grits are so largely used."

Rudolph, formerly senior physician at Bryce Hospital, was quite specific in his paper, "Pellagra—Honor to Whom Honor is Due" which appeared in *The Alabama Medical Journal*, August 1909, stressed Searcy's findings. Also, Dr. Seale Harris in his book, *Clinical Pellagra*, stated that Searcy had not been given credit which he deserved for being the first to produce experimental pellagra in the United States.

Following his report to the Medical Association of the State of Alabama, Dr. Searcy spent several months visiting nearly all of the Southern States and many of their hospitals for the insane where he made a survey of the incidents of pellagra in each institution. His report of that survey, "Pellagra in the Southern States" was published in the *New Orleans Medical and Surgical Journal*, December 1908. He included several of his cases of pellagra with pictures of the patients which illustrated the extent of some of the skin lesions. As to treatment, he stated that the pellagra patient should be taken off all products made from corn and substitute a good liquid diet and provide good hygienic surroundings but not in the bright sunlight.

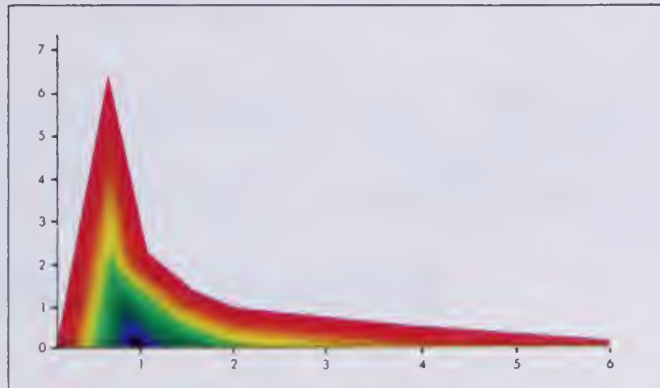
The first group of references with articles concerning pellagra in America include a fair sample of representative journals: *J.A.M.A.*; *New Orleans Medical Journal*; *Southern Medical Journal*; *American Journal of Medical Sciences*. They all refer to the fact that Dr. Searcy observed the first epidemic of pellagra in the United States. With this wide coverage, it seems unlikely that all of the members of the staff of the U.S. Public Health Service could have failed to notice that Searcy had made a monumental discovery of the first epidemic of pellagra in America. This is even more difficult to understand since all of the physicians had received their medical degrees in medical schools in America.

## PART II—Federal Bureaus Lose At Coca-Cola Trial, 1911

The story concerning the famous Coca-Cola Trial in 1911 is presented as evidence that our Federal Bureaus approached a new low in influence and moral behavior before the U.S. Public Health Service planned extensive studies on pellagra. Through the influence of Dr. H. W. Wiley, Chief of the Bureau of Chemistry and of the Bureau of Foods and Drugs; and F. P. Morgan, W. O. Emery and L. F. Kebler of the Laboratory of the Department of Agriculture, the Federal Government held the famous Coca-Cola Trial in the Spring of 1911, in Chattanooga, Tennessee. Judge E. T. Sanford of the United States District Court, Eastern District of Tennessee, presided. Mr. James

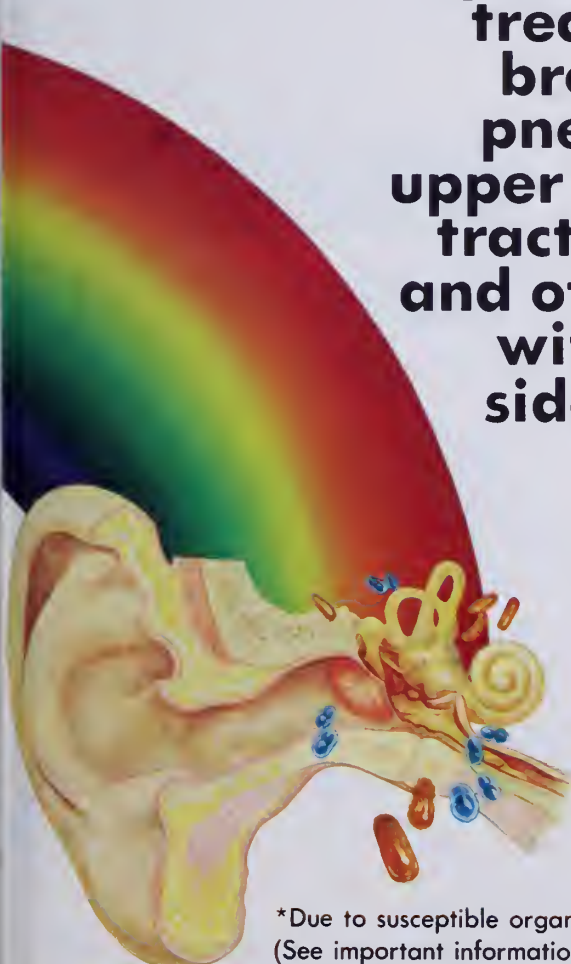


more  
than just spectrum

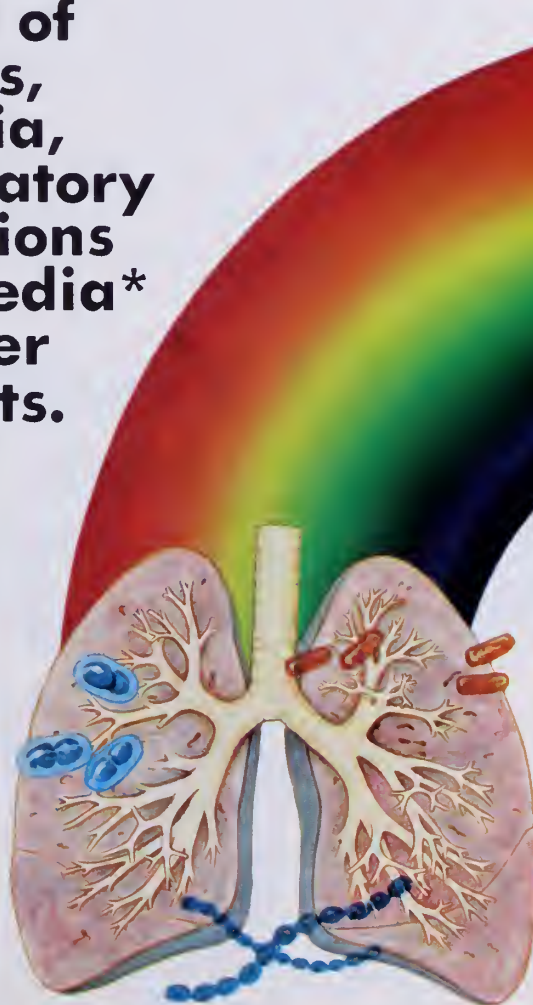


New **CYCLAPEN**<sup>®</sup>  
(cyclacillin) Tablets/  
Suspension

**Efficacy  
proven in the  
treatment of  
bronchitis,  
pneumonia,  
upper respiratory  
tract infections  
and otitis media\*  
with fewer  
side effects.**



\*Due to susceptible organisms  
(See important information on last page.)



# New **CYCLAPEN**<sup>®</sup> (cyclacillin) Tablets/ Suspension

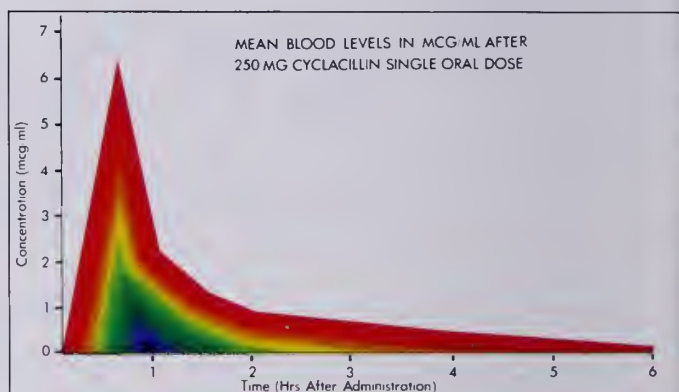
## efficacy with fewer side effects than ampicillin confirmed in studies of 2,581

Rapid, virtually complete  
absorption from GI tract

Rapid onset of action—  
mean peak serum levels  
within 30 minutes

Exceptionally high peak  
blood levels—3 times  
greater than ampicillin  
(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



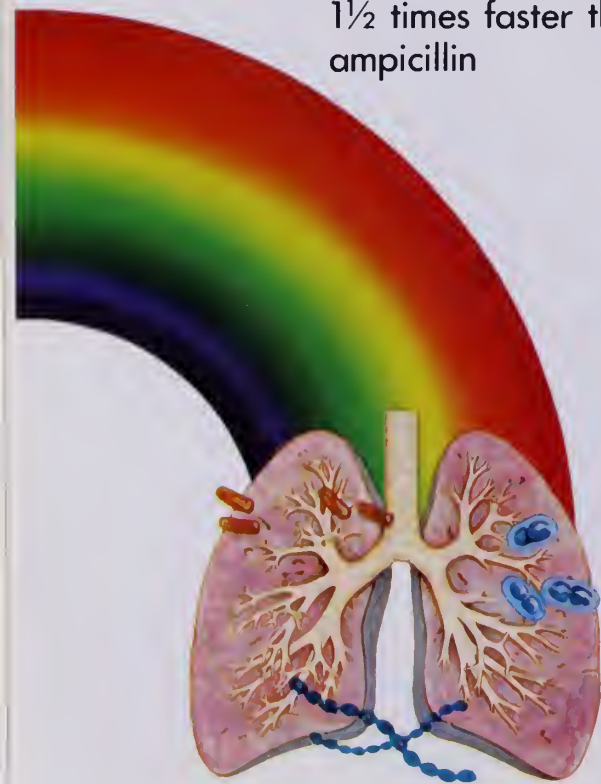
High cure rate with CYCLAPEN <sup>®</sup>		
Causative Organism	Bronchitis/Pneumonia <sup>†</sup>	No. of Patients
<i>S. pneumoniae</i>	100	73
	95	
Chronic Bronchitis <sup>†</sup> (acute exacerbation)		
<i>H. influenzae</i>	92	12
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>	
Streptococcal Sore Throat <sup>†</sup>		
Group A beta-hemolytic Streptococcus	100	44
	86	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

### more than just spectrum in bronchitis, pneumonia and upper respiratory tract infections<sup>†</sup>

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.

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# fewer side effects than double-blind patients\*

Fewer side effects with CYCLAPEN® in  
double-blind studies to date<sup>1,2</sup>

Total number of drug-related side effects in all patients	
CYCLAPEN®	128 of 1,286 (10%) of patients
ampicillin	202 of 1,129 (18%) of patients
Difference statistically significant ( $P < 0.001$ )	

CYCLAPEN® (cyclacillin)  
effective for bronchitis, pneumonia,  
and upper respiratory tract infections†

- Excellent clinical results in bronchitis,  
pneumonia and upper respiratory tract  
infections
- Significantly lower incidence of diarrhea  
and skin rash

1. Gald JA, Hegarty CP, Deitch MW, Walker BR:  
Double-blind clinical trials of oral cyclacillin  
and ampicillin, *Antimicrob Ag Chemother*  
15:55-58, (Jan.) 1979.

2. Doto on file, Wyeth Laboratories.



## more than just spectrum in otitis media

Clinical efficacy of CYCLAPEN® in otitis media†

Causative Organism		No. of Patients
<i>S. pneumoniae</i>	96	82
	95	
<i>H. influenzae</i>	88	96
	85	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

# more than just spectrum CYCLAPEN® (cyclacillin) Tablets/ Suspension

**Wyeth Laboratories**  
Philadelphia, Pa 19101

New from Wyeth Laboratories

# CYCLAPEN<sup>®</sup>

(cyclacillin) Tablets/  
Suspension

more than just spectrum in bronchitis,  
pneumonia, upper respiratory tract  
infections and otitis media\*

- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes
- Exceptionally high peak blood levels—3 times greater than ampicillin (clinical efficacy may not always correlate with blood levels)
- Rapidly excreted unchanged in the urine—1½ times faster than ampicillin
- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date
- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients
- New CYCLAPEN<sup>®</sup> Suspension—great-tasting raspberry punch flavor

\*Due to susceptible organisms.

## How Supplied

CYCLAPEN<sup>®</sup> (cyclacillin)

tablets:  
250 mg scored tablets  
500 mg scored tablets

### Indications

Cyclapen<sup>®</sup> (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below

Cyclapen<sup>®</sup> is indicated for the treatment of the following infections

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci  
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)

Otitis Media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*

Acute exacerbation of chronic bronchitis caused by *H. influenzae*\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis* (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections)

NOTE: Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing

#### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins

#### Warnings

CYCLAPEN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT

CYCLAPEN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS

SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN

ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN. BEFORE THERAPY WITH A PENICILLIN, CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED

AS INDICATED

PRECAUTIONS

Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken

PREGNANCY: Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman

ADVERSE REACTIONS

The oral administration of cyclacillin is generally well tolerated

As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

## CYCLAPEN<sup>®</sup> (cyclacillin) for oral suspension

125 mg per 5 ml:  
100 ml and 200 ml bottles  
250 mg per 5 ml:  
100 ml and 200 ml bottles

hypersensitivity to penicillins or in those with a history of allergy, asthma, fever, or urticaria

The following adverse reactions have been reported with the use of cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomit (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS)

Other less frequent adverse reactions which may occur and that have been reported during therapy with other penicillins are: anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy

As with other semisynthetic penicillins, SGOT elevations have been reported

### Dosage and Administration

INFECTION*	ADULTS	CHILDREN
		Dosage should not be in a dose higher than for adults
Respiratory Tract Infection & Pharyngitis**	250 mg q.i.d. in equally spaced doses	body weight <20 kg (lbs) 125 mg q.i.d. equally spaced doses body weight >20 kg (lbs) 250 mg q.i.d. equally spaced doses
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d. in equally spaced doses	50 mg/kg/day q.i.d. equally spaced doses
Chronic Infections	500 mg q.i.d. in equally spaced doses	100 mg/kg/day q.i.d. equally spaced doses
Otitis Media	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day q.i.d. equally spaced doses depending on severity
Skin & Skin Structures	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day q.i.d. equally spaced doses depending on severity
Urinary Tract	500 mg q.i.d. in equally spaced doses	100 mg/kg/day in equally spaced doses

\*As with antibiotic therapy generally, treatment should be continued for a minimum of 48 to 72 hours after the patient becomes asymptomatic or evidence of bacterial eradication has been obtained

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum of 10 days of treatment is recommended to guard against the risk of rheumatism or glomerulonephritis

In the treatment of chronic urinary tract infection, frequent bacteriologic clinical appraisal is necessary during therapy and may be required for several months afterwards

Persistent infection may require treatment for several weeks

Cyclacillin is not indicated in children under 2 months of age

Patients with Renal Failure

Based on a dosage of 500 mg q.i.d., the following adjustment in dosage interval is recommended

Patients with a creatinine clearance of <50 ml/min need no age interval adjustment

Patients with a creatinine clearance of 30-50 ml/min should receive doses every 12 hours

Patients with a creatinine clearance of between 15-30 ml/min should receive full doses every 18 hours

Patients with a creatinine clearance of between 10-15 ml/min should receive full doses every 24 hours

In patients with a creatinine clearance of <10 ml/min serum creatinine values of >10 mg % serum cyclacillin levels are recommended to determine both subsequent dosage and frequency



B. Cox, District Attorney, represented the Government.

Dr. L. F. Kebler visited the Coca-Cola Plant in Atlanta in 1907. Inspector J. L. Lynch visited the plant in July 1909. Dr. Kebler and Mr. Lynch were discovered in the basement of the Plant in October 1909 and they had not mentioned their proposed visit to anyone in authority of the company previous to their arrival.

On October 19, 1909, 40 barrels and 20 kegs of Coca-Cola syrup were shipped from Atlanta and were seized by Federal authorities in Chattanooga on October 21, 1909. The Government contended that the syrup violated the Federal Food and Drug Act since it contained an added ingredient, caffeine, which was a deleterious substance. Mr. J. B. Sizer, Attorney for the defendant, explained that the name, Coca-Cola, was trademark and had been registered since 1892, which was more than 10 years before the Food and Drug Act was passed.

The shipment of Coca-Cola syrup was held in Chattanooga and the trial began on March 13, 1911. When the trial opened, the following expert witnesses represented the Federal Government. H. F. Fuller, Analyst, Bureau of Chemistry; F. P. Morgan; W. O. Emery; and L. F. Kebler of the Drug Laboratory, Department of Agriculture; W. F. Boos, Chemist and Pharmacologist, Massachusetts General Hospital, formerly of Harvard University; H. H. Rusby, Dean of the College of Pharmacy and Professor of Materia Medica, Columbia University.

For the defendants, testimony was presented by Hobart A. Hare, Jefferson Medical College; L. Hektoen, E. R. LeCount, M. L. Haines, Albert P. Mathews, and J. A. Weisner, University of Chicago; John Marshall, Medical Department, University of Pennsylvania; R. L. Emerson, Harvard University; Allan M. Hamilton, Columbia University; John W. Mallet, University of Virginia; and Victor C. Vaughan, University of Michigan.

As the trial progressed, new witnesses were added for both the Federal Government and the Coca-Cola Company. It was learned during the trial that one of the Government Officials gave out the secret that if the Government was successful in the Coca-Cola Trial, it was the first of 2,500 similar cases which the Department of Agriculture was prepared to bring in various parts of the country.

Dr. Victor C. Vaughan, former Dean of the School of Medicine, University of Michigan, and Army Surgeon during the Spanish-American War, testified that caffeine in moderate amounts was beneficial. Dr. John W. Mallet, Professor Emeritus of Chemistry and past president of the American Chemical Society, testified that he had served through the Civil War and that he had observed the

beneficial effects of caffeine in the beverages used by the troops in that long and trying conflict.

The defense had a large number of citizens from both Chattanooga and Atlanta on the witness stand who testified that they had not observed any bad effects from drinking Coca-Cola for almost twenty years.

In his closing remarks, Judge Sanford stated, "Let us hope that the outcome of this case will serve as a warning to the Health Department not to bring suits against citizens hereafter until it knows that it is right." Then Judge Sanford returned a verdict in favor of the Coca-Cola Company and the famous trial was over on April 6, 1911.

It seems that Dr. H. W. Wiley was the principal Government Official sponsoring the trial against the Coca-Cola Company but since several of the Federal Departments were highly involved, they all lost in a very long and costly trial. No doubt that all of the Federal Bureaus that were involved in the trail were at a new low in influence.

### PART III—Experimental Production Of Pellagra Confirmed

Soon after Searcy's paper on an epidemic of pellagra appeared in the *J.A.M.A.* in 1907, pellagra was observed over a wide area of the United States and especially in the Southern States. At that same time, it seems that the members of the staff of the Public Health Service decided to stress coverage of the disease. In June 1909, Dr. C. H. Lavinder, past Assistant Surgeon, United States Public Health Service and Marine Hospital Service, alone with C. F. Williams and J.W. Babcock published a paper in the United States Public Health Reports on "The Prevalence of Pellagra in the United States—A Statistical and Geographical Note with Bibliography." The Bibliography was extensive and included two references to Dr. Searcy: *J.A.M.A.*, 1907, and *New Orleans Medical and Surgical Journal*, 1908. However, in the text he did not refer to Searcy's discovery of the first epidemic of pellagra in the U.S.A. or his experimental production of the disease by means of diet. Dr. Lavinder authored several papers concerning pellagra but never referred to Searcy's studies of the disease. In 1912, Dr. Lavinder presented a paper on "Certain Aspects of the Pellagra Question" at the Annual Meeting of the Medical Association of the State of Alabama, in Birmingham, but did not refer to Searcy's discoveries about pellagra even though he was speaking before Searcy's State Medical Association.

REFERENCES UPON REQUEST

# Sometimes it pays to be sick.

A patient with duplicate health insurance coverage can often collect more on a claim than he actually owes. This is one of the factors contributing to the rising cost of health care, because that extra money is coming out of all your patients' pockets in the form of higher and higher premiums.

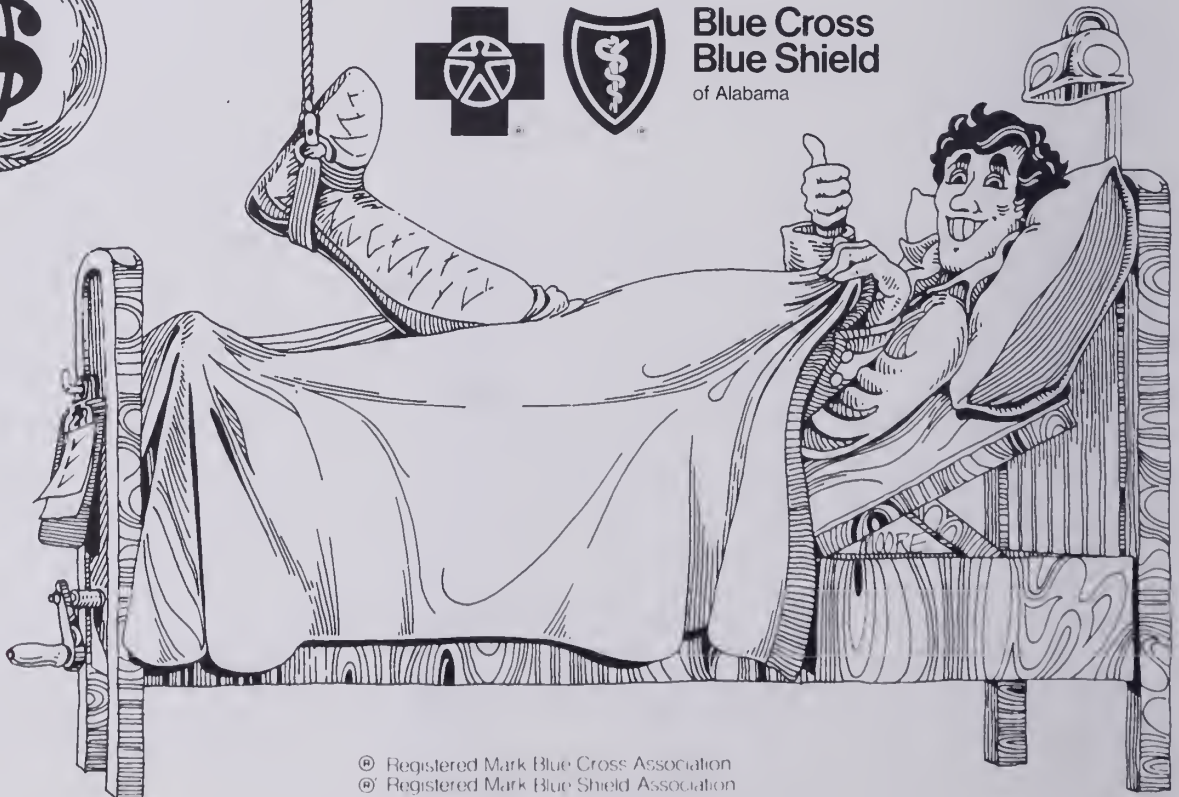
That puts you, as a doctor, and us at Blue Cross in the same boat. We need to work together to stop these duplicate payments.

Our professional relations representatives are available to work with you and your office staff on ways to eliminate payment by more than one health insurance coverage. They can also offer suggestions on other ways we can help hold down health care costs.

If we can keep people from profiting from an illness, being healthy will be easier to afford.



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Blue Shield**  
of Alabama



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# SEROUS OTITIS MEDIA

by  
David Hunter, M.D.

University of Alabama in Birmingham  
Department of Surgery  
Division of Otorhinolaryngology

## Serous Otitis Media

The understanding of Serous Otitis Media, non-purulent otitis media, middle ear effusion, sero-mucinous otitis media or other names that it may be called, is a basic understanding of the anatomy and physiology of the middle ear system. Let us begin with the eustachian tube or pharyngotympanic tube. This connects the tympanic cavity with the nasopharynx and is divided into a pharyngeal cartilaginous portion and a tympanic bony portion. The cartilaginous portion (24 mm) is twice as long as the bony portion (12 mm). The diameter of the tube is greatest at the pharyngeal end and least at the junction of cartilaginous and bony portions called the isthmus. The tube throughout is lined with a columnar ciliated epithelium with numerous mucous glands in the cartilaginous portion, which is like the lining of the trachea.

The muscular control of the eustachian is from the tensor palati and the levator palati. In the majority view the tensor palati muscle takes partial origin from the lateral aspect of the cartilage and contraction of this muscle results in an opening movement. Certainly, on swallowing and yawning this muscle contracts and these actions open the tube. On the other hand, it has been suggested that the tensor has no origin from the cartilage at all, and it is the levator palati that is concerned with tubal opening.

The levator palati is the thickness of a pencil lead and runs beneath the whole length of the membranous floor of the tube. If the action of this muscle is to elevate the palate in an upward and backward direction, it follows there must be a matching strain downwards and forwards from its origin. Its origin is fixed except where it is attached to the tube. The tubal attachment, therefore, presumably moves towards the palate during contraction, i.e. in a downward and forward direction,

and so is opened. The general opinion is that the active opening of the tube occurs on contraction of both tensor and levator palati muscles and that in the resting phase the tube is passively closed.

The tympanic cavity is that part of the middle ear cleft central between the tympanic membrane and the cochlea. It is, however, considerably larger than the dimension suggested by the tympanic membrane having an upward extension behind the roof of the external auditory meatus, called the epitympanic recess or attic, which accommodates the main body of the ossicles. The tympanic cavity has a variable extension downwards below the level of the floor of the external auditory meatus called the hypotympanum which usually contains air cells. The cavity is irregularly quadrilateral with the shortest length anteriorly and allowing for variations in size and shape. It is lined with an epithelial membrane. This epithelial membrane is made of five types: (1) The nonciliated cell without secretory granules, (2) the nonciliated cell with secretory granules (including the globet cell), (3) the ciliated cell, (4) the intermediate cell, and (5) the basal cell.

The mastoid air cell system is a system of inter-communicating air cells. The cells are classified as zygomatic, tegmen, angle, marginal, plate, periantral, retrofacial, peri-labyrinthine, tip and peritubal. Due to the variation in size and distribution of cells, this detailed nomenclature is somewhat academic. The lining is predominantly simple squamous or cubodial epithelium, which is similar to the alveolus of the lung and participates in gaseous exchange.

## Pathogenesis:

There have been two theories on the pathogenesis of Serous Otitis Media. Sade<sup>1</sup> has stated that Serous Otitis Media involves two factors: an

inflammatory and non-inflammatory. In the inflammatory part there are principally three phenomena: (1) an inflammatory process involving inflammatory cells infiltrating the submucosa, edema and enlargement of capillaries, (2) a metaplastic process of goblet cells and (3) the eustachian tube is found to be open through its whole length. This covers about 65% of the patients which explicitly have a previous history of upper respiratory inflammatory disease. This still leaves the question of what about the other 35% which does not fall into the classification of inflammatory. Sade calls this non-inflammatory. This is a deficiency in aeration secondary to eustachian tube malfunction. This malfunction and its related problems is related to the gas composition in the middle ear. Measurements in S.O.M. have shown a four-fold higher concentration in CO<sub>2</sub> than in the normal ear. There is clinical and experimental tissue culture data which implicates such high CO<sub>2</sub> concentrations as affecting direction of cellular differentiation in general and, specifically, a shift in respiratory cell differentiation towards a cell population rich in mucus producing cells. Gunderson and Gluck<sup>2</sup> have shown that these metaplastic changes in the middle ear mucosa does reverse itself with good aeration of the middle ear cleft.

Murphy<sup>3</sup> has shown that propulsion of mucus down the eustachian tube causes negative pressure in the middle ear space. It should then be considered that in those 35% of children who do not clear after the inflammation has ceased, is this the mechanism and not eustachian tube malfunction as Sade states. Certainly this must be a contributory factor.

The pathophysiology of the obstructed tube theory of serous otitis media can best be understood by looking at a well known entity of the pulmonary system. Should a bronchus become obstructed, gaseous exchange continues distant to the obstruction. This creates a negative pressure in the system, which once great enough will cause collapse of the system which we call atelectasis.

Now, in the middle ear system, let us compare the eustachian tube to a bronchus and the mastoid air cells to the alveolus. Once the eustachian tube is blocked or nonfunctioning gaseous exchange continues to occur in the mastoid air cells, a negative pressure is caused in the system. In the lungs we saw that once the pressure was great enough, the system collapsed; but in the middle ear system, due to the bony encasement, it cannot collapse. This negative pressure phase in the middle ear is characterized by pulling the tympanic membrane back or retraction. This phase is often called barotitis or aerotitis. Once the negative pressure becomes high enough to overcome oncotic pressure, the serous fluid is pulled into the middle ear space and is known as serous otitis media. Some authors believe that if this is a long standing problem then the fluid becomes tenacious and is called mucoid otitis media, "glue ear" or chronic serous otitis media. It should be stated that with the more recent knowledge, this theory has fallen out of favor.

#### Detection:

The detection of middle ear effusions has traditionally been by otoscopic examination and

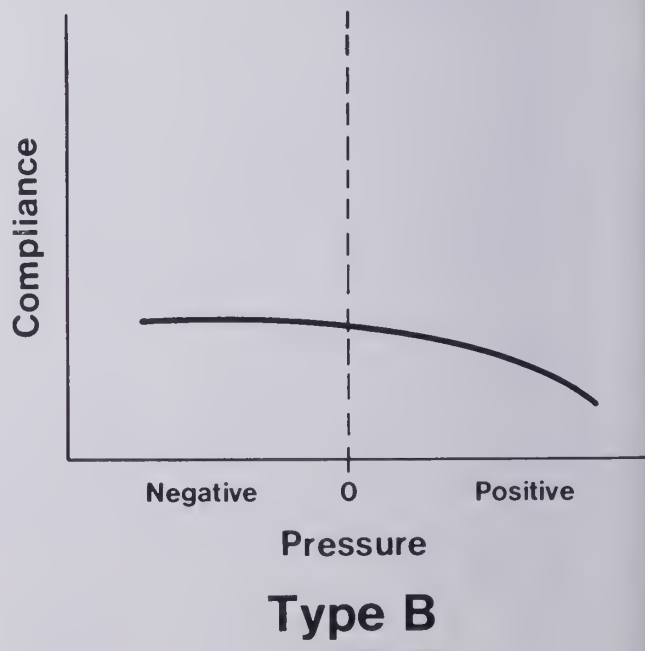
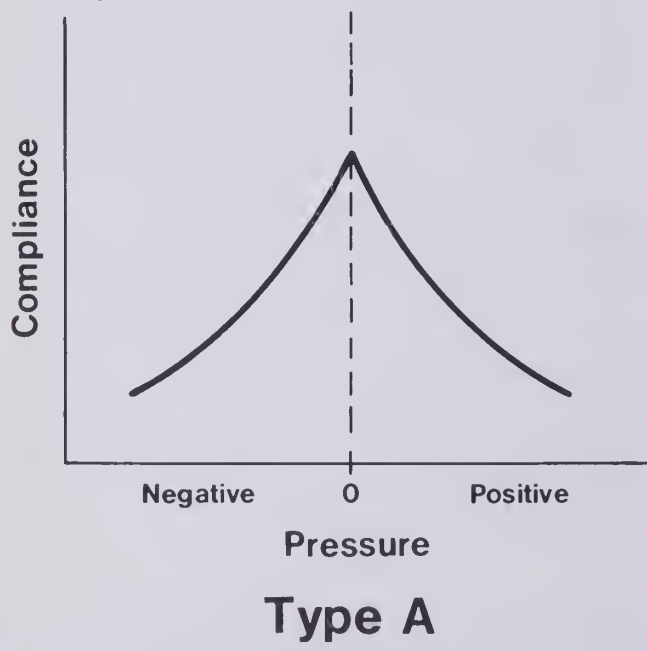


Figure 1

Figure 2



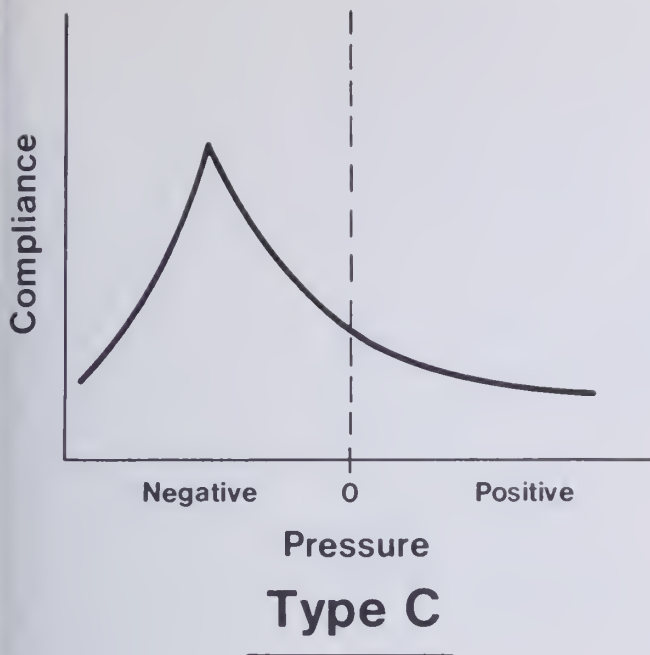


Figure 3

pneumatic examination. Most textbooks describe the typical findings of a slightly retracted drum: amber coloration of the drum, often a fine black line across the drum and occasionally air bubbles behind the drum. These findings with decreased or nonmobility of the drum on pneumatic examination is supposedly the sine-qua-non of serous otitis media. In recent years we have found that physical examination may not be as absolute as many otolaryngologists will have us believe. With the advent of impedance audiometry we have found that experienced otolaryngologists may miss as much as 20% of middle ear disease based on physical examination alone.<sup>4</sup> These errors occur most often in detection of Barotitis or negative pressure stage of serous otitis media.

In using the impedance audiogram we must break this down into three parts. First is the tympanogram—the standard classification used is the Jerger classification. Jerger<sup>5</sup> described five basic types, A, B, C, Ad, As.

Type A is the normal range with the greatest impedance change occurring around zero pressure. (See Figure 1.)

Type B is that of a non-mobile tympanic membrane, most commonly seen with serous otitis media, but can be found in adhesive otitis media and in perforation of the T.M. (See Figure 2.)

Type C is characterized by the greatest change in impedance occurring in the negative pressure range. This is seen with Barotitis. (See Figure 3.)

Type Ad is unmeasurable impedance at the zero pressure range. This is described with ossicular

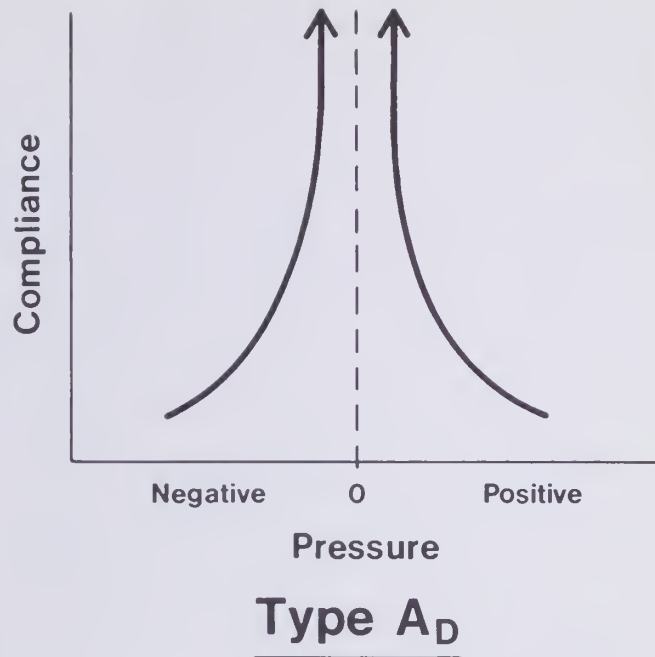


Figure 4

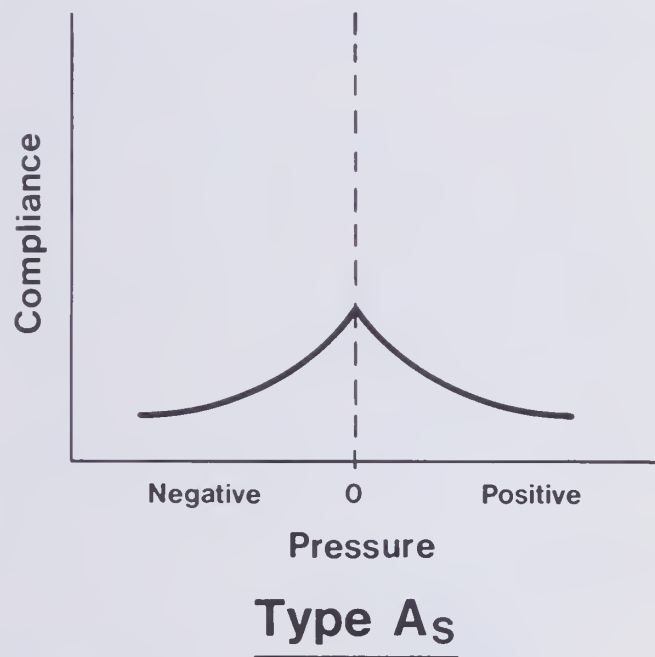


Figure 5

discontinuity, but can be seen in floppy tympanic membranes. (See Figure 4.)

Type As is a shallow impedance or stiffness impedance with the greatest change occurring around zero, but the peak not rising to the normal range. (See Figure 5.) This is seen with disease processes that will stiffen the middle ear mechanisms, most commonly otosclerosis, malleus fixation syndrome or congenital fixation of the ossicular chain. Although recent work by Hunter and Keim<sup>6</sup> suggests that this can be seen with early serous otitis media or with recurrent middle ear disease.



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The static compliance is generally not a very sensitive test unless it is well above normal or well below normal. In dealing with serous otitis media, we expect a low static compliance. In children with serous otitis media 0.10 to 0.2 cc is not uncommon. It can help in deciding if a perforation exists in that a Type B tympanogram with a high static compliance would be more typical of a perforation than serous otitis media.

The acoustical reflex test is a much more sensitive test in detection of middle ear disease. The normal range is 85-105 at dBSL. Elevated or absent reflexes is the typical picture seen with serous otitis media. It must be kept in mind that 3% of the general population will have a congenital absent of the stapedial muscle.

A complete view of impedance audiometry is not possible in the scope of this paper. To use impedance audiometry it should be stressed that it should be viewed as a composite of test and not to look at one test only.

Audiometry has been and still is a large component of testing that can aid in the diagnosis of serous otitis media. This generally shows a conductive loss in the range of 25-30 dB, but this may be variable. The limitation of this form of testing is the age of the patient. Certainly sound field testing, which is the major form of testing in young children, cannot distinguish between sensory-neural loss and conductive loss.

### Treatment:

The treatment of Serous Otitis Media can be divided into two parts: medical and surgical. The medical management runs a large gambit from observation to decongestant, antihistamine and antibiotics. The proponents of observation have justified this with the statement that serous otitis media is a self limiting disease that will resolve with no sequelae. The mild conductive loss, they say, is short term and will cause no impairment of function. Should this become a problem they suggest the use of a mild gain hearing aid. This philosophy has been strongly challenged by many pediatricians and otolaryngologists. Skinner<sup>7</sup> has written on the language delay in children with mild hearing losses. Batkin,<sup>8</sup> et al have shown in rats that auditory deprivation leads to atrophy in the auditory center of the brain from which they may never fully recover from. From these findings I feel as most pediatricians and otolaryngologists do, in that serous otitis media should be treated. The use of decongestants, antihistamines and antibiotics, or any combination thereof, is debatable. I personally use the decongestant/antihistamine combination: the decongestant to shrink the swollen

tissues and the antihistamine to aid in control of allergic causes and bind the receptors of histamine which is a local chemical agent of inflammation. I have not used antibiotics, although it should be said that 20% of ears with Serous Otitis Media that were cultured grew out microorganisms. Our European colleagues have for a long time criticized Americans for the indiscriminate use of antibiotics. They feel we have not allowed the child's immune system to develop the normal immune response to the common organism. In this they never become immune to these organisms and will present with recurrent attacks by the same organisms.

The length of treatment is again much debated. I have used four to six weeks. If at the end of this time period the child shows no improvement in the disease process, I have advocated surgical management.

Surgical management has been mainly in the form of placement of ventilation tubes. The reasoning behind this is that the ventilation tube will allow aeration of the middle ear space which has been lost by a nonfunctioning or poorly functioning eustachian tube. Certainly, ventilation tubes are not without risks and complications. The general anesthesia required with most small children is a risk in itself; the worsening of their hearing with ossicular discontinuity and damage to the oval or round window with resultant sensorineural hearing loss; the early extrusion of the tube before any reasonable benefit can be gained; the persistence of a perforation which latter requires a tympanoplasty and always there exists the chance of recurrent infection or foreign body reaction necessitating the removal of the tube. So, as in any surgical procedure, the risks should ALWAYS be weighed against the benefits and a reasonable medical decision made.

Adnoideotomy in the treatment of serous otitis media is still very much in debate. At present, this has not been shown to be beneficial in preventing recurrence of serous otitis media.

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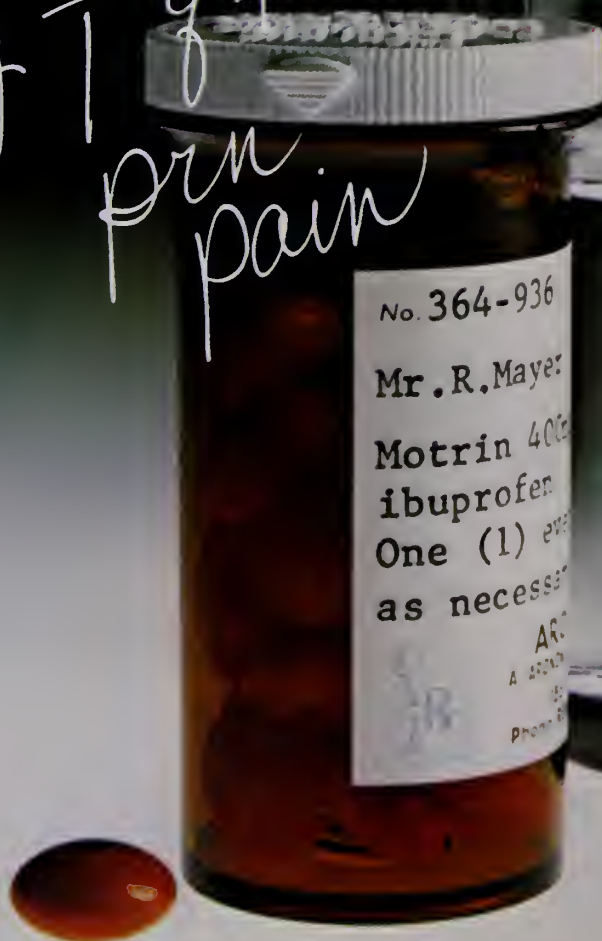
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Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

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\*Incidence 3% to 9%.

#### Incidence less than 1 in 100

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

#### Causal relationship unknown

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

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# A Critique of Impure Reason or Do They Really Think Like That in Medical Schools?

By O. G. Burkart, M.D.

In times past, one would have thought that the business of Deans in medical schools would be directed toward educating students to be physicians.

Now, with the chilling hand of totalitarianism touching every walk of life, and given the ready acquiescence to statism by the educators in our universities, the education of students for a particular discipline is being subordinated to the direction of central authority.

Moreover, the education in our medical schools primarily directed toward excellence in a particular discipline relative to the wants of society, is being subordinated to the perceptions of those who regard themselves as the main arbiters of the needs of society.

And so we have Deputy Dean C. W. Scott, M.D., of the University of Alabama in Birmingham, writing about the control of physician production in the *MASA Journal* for August 1979. His article should be read as a prerequisite to this critique.

As if physicians were so many units, to be the end products of a machine governed by a dearth or plethora of the products already in existence! Servomechanistic system and feedback loop—governed by men who see doctors not as human beings but as things at the end of an assembly line.

Karel Capek, George Orwell, and Aldous Huxley knew whereof they spoke when they wrote of "universal robots," "memory holes," and "Brave New World." They have nothing on Doctor Scott's servomechanistic system and its feedback loop. Too, Doctor Scott's perception of medical education in the

early part of this century is as unique as his perception of medical education at present. There were not too many physicians in the United States in 1910. There were too many poorly educated physicians. The Flexner Report resulted in the closing down of diploma mills which necessarily decreased the number of medical graduates, but this had nothing to do with a determinant "belief," or a desire to limit the number of physicians. It was simply a rational approach to the upgrading of medical education standards.

The question occurs: If premise and conclusion about the numbers and training of physicians in the population early in this century were erroneous, how reliable are the present conclusions about the "control" of physician "production" now?

Dean Scott, along with the majority of medical educators, seems to accept what congress "finds and declares," and servomechanistically goes along with Congress' perceptions. An arrangement such as this would seem to absolve him of his prime responsibility for thinking what is good or bad for American medicine. But he cannot absolve himself in this fashion. Beside the fact that this is accession to a group which is anything but infallible in matters medical or social, witness the yawning pit of fiscal collapse staring us in the face where Social Security is concerned.

It was the Congress of 1965-1966 that decided to load Medicare and Medicaid onto an already tottering Social Security system that got us

into the present strait. What makes Dean Scott so confident that what Congress finds and declares *now* is the good and the true, with regard to the education of physicians? There is a vast difference between the endocrine system in the human body and the ponderous machinery of social legislation represented by the Congress and the people desirous of "doing good."

Long ago I learned to consult my own resources rather than the tender mercies of Congress. Having experience with the fitful supply and demand system of the Army Medical Service and other ancillary wonders I could name, I have no confidence that a congressional medical school consortium can optimally regulate the supply of doctors. I once spent 18 months vainly trying to gauge the bumbling army physician supply machine and get my army service completed. After 18 months I decided that I would set up my practice before I reached retirement age.

Lo! Within a week after opening my office, the Army decided to go from not needing physicians to needing scads of physicians, and this a year and a half after the truce in Korea! So I was called into service and have never trusted government since.

Servomechanistic indeed! The Federal Moloch is more like a servosocialist machine. The Bible says, "Put not your trust in princes." The Congress has 535 princes, and Doctor Scott is willing to trust every one of them! Need I say more about my lack of confidence in American medical education at the present day?

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# Extra Adrenal Pheochromocytoma:

## A CASE REPORT

Richard L. Dempsey, MD,\* William A. Webb,  
MD,\* Sandra Yancey, RN\*†

Ten to fifteen percent of pheochromocytomas are found in the extra-adrenal position.<sup>1</sup> One of the extra-adrenal sites from which these tumors arise is the Organ of Zuckerkandl, a collection of paraganglion cells adjacent to the origin of the aortic bifurcation. Of forty pediatric extra-adrenal pheochromocytomas reviewed by Stackpole and Melicow, five were located at the aortic bifurcation.<sup>2</sup> These tumors tended to be small, weighing between 20 and 30 grams. The largest single tumor, weighing 108 grams, was reported by Weiman.<sup>3</sup> In 1975 Glenn and Gray reported four additional instances of functional tumors of the Organ of Zuckerkandl and stressed the importance of case reporting.<sup>4</sup> Another case is herein reported.

### Case Report

F.O. (140193), a twelve-year-old black female, was admitted to the hospital with a one year history of intermittent headaches and stomach pain. For several weeks prior to admission she had experienced increasing intensity of the headaches. In addition, episodes of sweating had been noted by the family.

On physical examination the patient was noted to be asthenic, and on palpation of the abdomen there was a mass present in the right abdomen. The child was also hypertensive: right arm 200/150 mmHg; left arm 190/140 mmHg; right leg 230/168 mmHg. A tachycardia of 168 was also present.

A twenty-four hour urinary VMA determination yielded 24.2 mg. (normal: 0-10 mg/ 24 hours) A twenty-four hour urinary catecholamine determination yielded 166 Mcg. (normal 15-140 Mcg/ 24 hours).

An intravenous pyelogram revealed an obstructed right ureter, resulting in marked dilatation of the right collecting system. (Fig. 1) The liver scan was negative.



Figure 1

\*Surgical Clinic, Inc., 121 North 20th Street, Opelika, AL 36801

†Physician's Assistant, Surgical Clinic, Inc.



Figure 2a

An aortogram revealed a large, vascular, irregularly shaped mass, some ten centimeters in diameter, projecting over the lumbar spine, predominantly to the right, but extending across the midline. The mass displaced the lower pole of the right kidney laterally and displaced the aorta to the left. (Fig. 2a & 2b)

Following the aortogram, an inferior vena cavagram was done. The inferior vena cava was not obstructed, although there appeared to be irregular extinsic compression of the cava in the area of the mass. (Fig. 3)

Pre-operatively, phynoxybenzamine hydrochloride (Dibenzylin) was given and the blood pressure returned to normal. Attention was given to pre-operative volume replacement with fluid and colloid.

At laparotomy a highly vascular lobular mass, measuring 8.5 x 4.5 x 4 cm, and weighing 107 grams, was found in the right aortic area. During the procedure hypertension was controlled with sodium nitroprusside (Nipride). After ligation of the blood supply, the tumor was removed and the blood pressure dropped to 70/50. Blood and vasopressor (levarterenol bitartrate (Levophed)



Figure 2b

drip) were given. The child made an uneventful recovery and the blood pressure remained normotensive. Twelve months post-operatively, the blood pressure has remained normal.

### Discussion

The most common symptoms of pheochromocytoma in children include headache, sweating, nausea, vomiting, weight loss, visual disturbances, and sustained hypertension.<sup>2</sup> Palpable abdominal masses are uncommon. Pheochromocytomas remain a rare, but serious problem in children and should be considered as a cause of the above symptoms.

A child suspected of having pheochromocytoma can best be evaluated in the hospital. Accurate urine collections for VMA and catecholamines should be done. An IVP is indicated because of the possibility of renal-vascular hypertension and also because the kidney can be displaced by an adjacent intra- or extra-adrenal pheochromocytoma. Selective angiograms are most useful in demonstrating tumors arising from the Organ of Zuckerkandl.





Figure 3

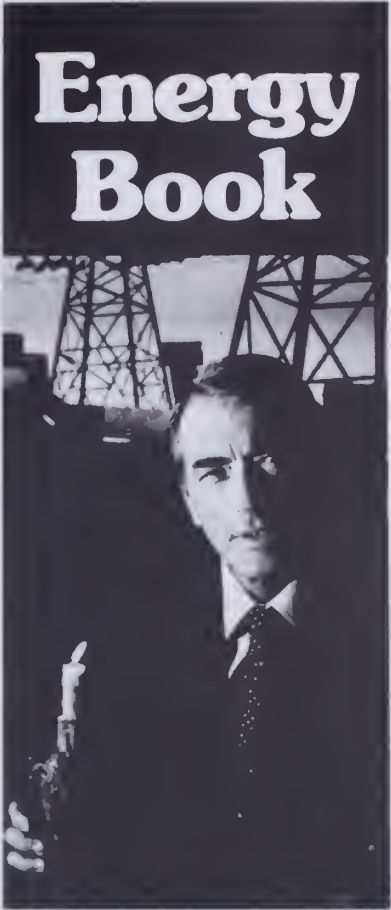
The case herein reported demonstrates a single palpable abdominal pheochromocytoma with accurate pre-operative diagnosis and localization.

References

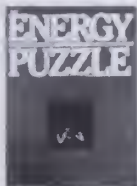
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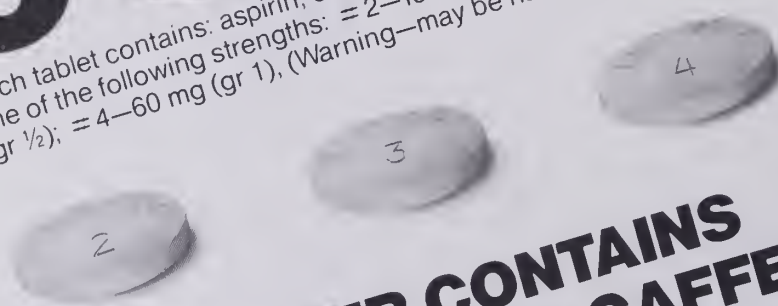
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OBSTETRICS AND GYNECOLOGY Age 29; B. J. Medical College, 1972; seeking practice in specialty, assistant or associate, or multi-specialty group in a town with a population of 10,000 or more. Available July 1980. LW-110379.

OPHTHALMOLOGY Age 32, Kansas, 1974, American Board Eligible in 1980, seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

...

PEDIATRICIAN Age 29, University of Alabama, 1975, National Board Certified, American Board Certified, seeking practice in single specialty group, multi-specialty group, and/or partnership in a medium-sized or larger town, preferably between 20,000 to 80,000 population. Available November 1980. LW-120279

...

PEDIATRICS Age 29, University of Alabama, 1975, seeking practice in specialty preferably in Birmingham or in a town with a population of 200,000. Available September 1980. LW-010180.

...

PEDIATRICS Age 31, Downstate Medical College, 1972; American Board Certified, seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110779. (See LW-11087)

...

RADIOLOGY Age 32, University of Alabama, 1973; American Board Certified; seeking practice in single specialty group, partnership or institutionally based. Available July 1980. LW-17661

SURGERY, GENERAL Age 31; University of Alabama, 1974, American Board Eligible, 1980; seeking practice in single specialty group, partnership or solo. Available August 1980. LW-18156.

...

SURGERY, GENERAL Age 32, Downstate Medical College, 1972, American Board Eligible, seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110879. (See LW-110779)

...

SURGERY, GENERAL Age 31; University of Tennessee, 1974, will be American Board Eligible in 1980. LW-111079.

...

SURGERY, GENERAL Age 30, University of Alabama, 1974, National Board Certified; will be American Board Eligible in 1980; seeking practice in partnership, single specialty group or institutionally based. Available July 1980. LW-20307.

...

SURGERY, GENERAL Age 32; Meharry, 1971; seeking practice in multi-specialty group, partnership or industrial. Available June 1980. LW-21209.

## PHYSICIANS WANTED (Opportunities for Practice)

EMERGENCY ROOM—Large Southern Clinic needs Emergency Room Physician interested in all types of trauma. Excellent salary plus benefits. PW-120379.

...

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

...

GENERAL SURGEON—Large Southern Clinic needs General Surgeon interested in trauma and hand surgery. Excellent Salary plus benefits. PW-120179.

...

ORTHOPEDIC SURGEON—Large Southern Clinic needs Orthopedic Surgeon interested in hand and back surgery. Excellent salary plus benefits. PW-120279.

...

PEDIATRICIAN—Wanted to join Board Certified, established practicing pediatrician with extensive practice in general pediatrics, pediatric allergy, consulting pediatrics. Outstanding geographic, economic and professional opportunity. Minimal night & weekend work due to cooperative arrangements. PW-100479.

### OPPORTUNITIES FOR GENERAL PRACTITIONERS

Town of 1,000 population; less than 10,000 trade area in Central Alabama, nearest large city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

...

Opportunity for general practice in the second largest town in a Southeast Alabama community that includes a trade area of 4,000 population located a short distance from the Gulf of Mexico and one of the largest lakes in the state. The median age of the population is 27.7 years and 38 per cent of the population is below age 18. Town had a physician in recent years when the physician died. One dentist is located in the town. Principal source of income of the community is agriculture or agriculturally-related businesses. There are 10 churches; 2 schools, public and private; 2 modern banks. A multi-purpose recreational park has just been completed which includes two tennis courts and softball and baseball fields. Office space available at the community health center clinic now under construction. Nearest hospital located eight miles away in metropolitan center of 50,000 plus population. PW-110179.



Mrs. Eugene H. Bradley  
President, A-MASA

## Travel Into A New Year

This month is the beginning of a new year. MASA is conducting a Leadership Conference. I am planning to attend this conference. The participants in the sessions are very impressive. One way that we can benefit is by attending and then using the information we have obtained. Our AMA Auxiliary sponsored a Leadership Conference in October in Chicago. I would like to share with you some of the thoughts of the program participants on how to be an effective leader.

You, a member of MASA, hold the keys to a happy journey for your local medical society, your community, your state and national Association. It is you who plays a very real part in mapping the future routes taken to reach goals. And you can, if you will:

**TRAVEL EXPECTANTLY.** Every meeting you attend is like a package to be opened. Untie the strings with an expectation of adventure and success. Keep your organization alive and growing by equipping yourself to help make decisions, to weigh pros and cons of issues, and to support decisions of the majority.

**TRAVEL WITH CURIOSITY.** It is not how far you go, but how deeply you go that mines the gold of experience. Take full advantage of resource materials and communications available through your

organization. Understand and properly exercise the rights and duties of your membership. Responsibly share in the welfare of your medical society by shouldering a part of the load through which you and the society will grow.

**TRAVEL WITH IMAGINATION.** As the old Spanish proverb puts it: "He who would bring home the wealth of the Indies must carry the wealth of the Indies with him." Praise others' services and efforts. Spark interest and involvement through your enthusiasm and encouragements. Be positive. Look at the total picture and help make the best decision for all involved. Recognize need for changes and accept the challenge of pursuing new goals.

**TRAVEL PATIENTLY.** It takes time to understand others. Be flexible and open to people and situations you meet. Assume a warm, friendly attitude. Accept every member with a due appreciation of their strengths and a tolerance of their quirks and weaknesses. (We all have a few of each of these.)

**TRAVEL FEARLESSLY.** Banish worry, timidity, and doubt in your value as a participating member. Know your strengths and weaknesses, your potentialities, aims and purposes. Have courage in your own convictions—champion the right to be yourself. Be gentle with yourself,

learn to like yourself, to forgive yourself, for only as we have the right attitude toward ourselves can we have the right attitude toward others. In relations with others, follow the wise axiom of Shakespeare who wrote, "To thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man."

**TRAVEL HOPEFULLY.** Recognize that although you cannot always control what happens to you, you can always control how you respond—to successes and to failures. True success is refusing to let present loss or failure interfere with your long-range goals. Accept the challenge of the difficult. Do not pray for tasks equal to your abilities, but for abilities equal to your tasks.

MASA Member, If you are not now a leader and never intend to be one, you can use these same keys and provide your leaders with a good and effective follower. Good Organizations and Good Leaders are the result of having Good Membership. So let's travel along together as we begin this new year. I have given you the keys for the vehicle to take this trip but the mapping of this future route is up to you.

HAPPY JOURNEY—

A cursive signature that appears to read "Gaxie".

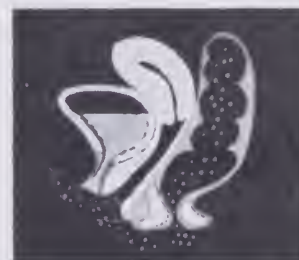
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# For recurrent attacks of urinary tract infection in women

## Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.



### Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications and Usage:** For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

**Also for the treatment of documented *Pneumocystis carinii* pneumonia.** To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (Federal Register, 37-20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

**Warnings:** Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

**Urinary Tract Infections:** Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

*Children two months of age or older*

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment.

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonia:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

**Supplied:** Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

**Please see back cover.**

Her next attack of cystitis may require

# the Bactrim™

## 3-system counterattack



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of

Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introcolonization by fecal uropathogens. It has no significant effect on other normal, necessary intestinal flora.

## Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.



# JOURNAL

of the Medical Association of the State of Alabama

FEBRUARY, 1980

*The Case  
for Joining:*



*vol 49 #8*  
**A Matter of Survival**

Page 4

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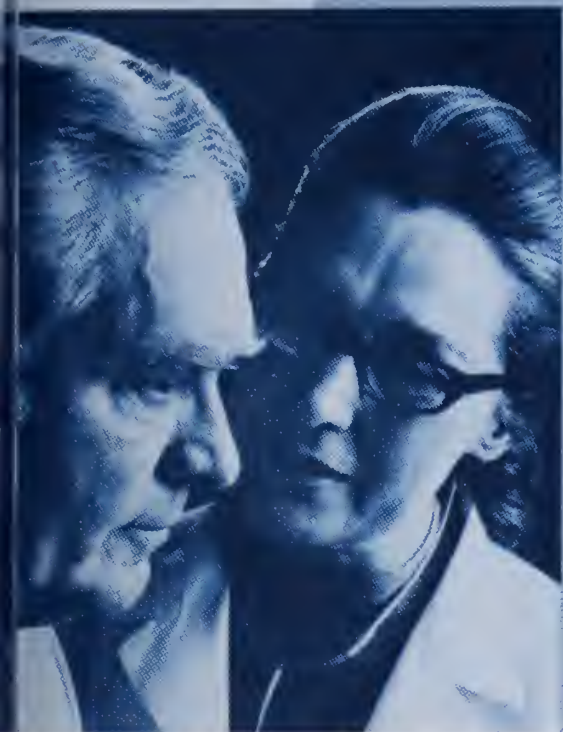


## proven antianxiety

Highly specific calming action  
virtually free of unwanted  
side effects: this was the remarkable  
clinical promise of Librium (chlordiazepoxide HCl).  
And today this promise continues to be  
fulfilled in a wide variety of patients  
you see every day.

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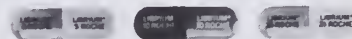




The published record on Librium is enormous. So large, in fact, it had to be put into a computer data bank and retrieval system. It's a record that shows Librium is highly effective in relieving anxiety; that Librium is seldom associated with serious side effects; that Librium rarely interferes with mental acuity at proper doses; that Librium is used concomitantly with primary medications. However, as with all CNS agents, patients should be warned against hazardous activities requiring complete alertness, and about possible combined effects with alcohol.

# performance

***Librium***®  
*chlordiazepoxide HCl/Roche*



5mg, 10mg, 25mg capsules

***synonymous  
with relief  
of anxiety***

- ☐ An unsurpassed safety record
- ☐ Minimal effect on mental acuity, in proper dosage
- ☐ Predictable patient response
- ☐ Is used concomitantly with primary medications, such as anticholinergics and cardiovascular drugs

Please see next page for summary of product information.



# **Librium**<sup>®</sup> 5mg, 10mg, 25mg capsules *chlordiazepoxide HCl/Roche*

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage, withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants, causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction, changes in EEG patterns (low-voltage fast activity) may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Usual Daily Dosage:** Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. *Geriatric patients:* 5 mg b.i.d. to q.i.d. (See Precautions.)

**Supplied:** Librium<sup>®</sup> (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose<sup>®</sup> packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs<sup>®</sup> (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

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**Style:** The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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# From the Executive Director

## A Call To Arms

The overwhelming and gratifying praise for MASA's Leadership Conference in Montgomery Jan. 25-26 was qualified by only one recurrent comment: The speakers, while excellent, posed more questions than they provided answers, many of you said.

But that could have been predicted from the theme, which was set by James H. Sammons, M.D., Executive Vice President of AMA, in his two addresses pointing to the precipitous path ahead for medicine in the 1980s.

Dr. Sammons made no bones about it: American medicine, as it is known today, will survive or perish in the decade just begun. And if it perishes, heaven forbid, it will do so because literally thousands of American physicians didn't care enough to get involved to protect their heritage from the ambushes of the many forces that would destroy everything generation after generation of doctors labored to build.

"There Is No Free Lunch" was the title of Dr. Sammons Friday night opening address. Since he is Alabama born and thus no stranger to our quaint sayings, he might as easily have called it: "Fish or Cut Bait."

The signs are everywhere that the long predicted and long feared Armageddon for American medicine is at hand. And the aggressors do not look like evil men. Most of them—political leaders, jurists, consumer advocates, bureaucrats—may be well-meaning and well-intentioned. It was just this kind of threat the late justice Louis Brandeis warned of more than a half-century ago when he wrote in one of his decisions:

"Experience should teach us to be most on our guard to protect liberty when the government's purposes are beneficial. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greater dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding."

The questions raised will be answered, if they are answered, by a united federation of American physicians pooling their collective strength, wisdom and public influence to turn back the assaults.

And that federation begins with individual physicians meeting together at the county society level. Their ideas and opinions are then transferred to the state level, whence they join those of physicians from every city, town and hamlet in the nation at the AMA House of Delegates.

Dr. Sammons has called this structure, with justification, "the world's most democratic organization." No opinion is ignored. And even the minority opinion can, in a short time, become that of the ruling majority, as in the classic example of AMA's complete reversal of its stand on national health insurance last year. The resolution that brought that about started at a local level in Florida.

You do have a voice in this, the most representative organization in the world.

S. Lon Conner

# Quinamm

AVAILABLE ONLY ON PRESCRIPTION

### Brief Summary

**INDICATIONS:** For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

**CONTRAINDICATIONS:** Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

**PRECAUTIONS:** Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication. Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

**ADVERSE REACTIONS:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

### DOSAGE AND ADMINISTRATION:

1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

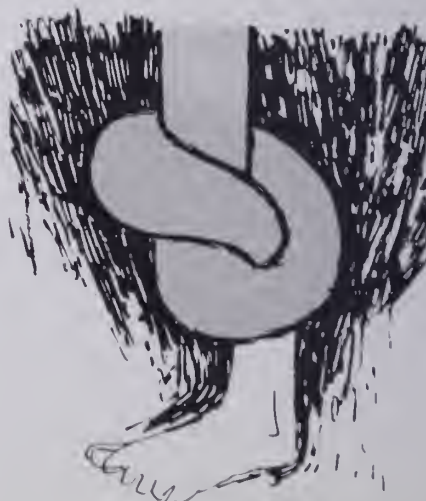
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for Knotts in the night



# Quinamm<sup>TM</sup>

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

## specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease... consider Quinamm... simple, convenient dosage—usually just one tablet at bedtime... can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.

# $\alpha$

## Alpha Stimulation

Central Control of  
Blood Pressure\*

\*The Family of Man™ by Roberto Moretti,  
a statuary in crystal symbolizing the broad range of  
hypertensive patients eligible for therapy with Catapres





# The Alpha Advantage:

**It's for all kinds of hypertensives**

- *Unlike beta blockers, Catapres® has no contraindications.*
- *Catapres can be useful even in these patients with:*

Congestive heart failure	Allergic rhinitis
Ventricular hypertrophy	Hepatic disease
Hyperglycemia	Hyperuricemia
Diabetes mellitus	Gouty arthritis
Bronchial asthma	Sulfonamide hypersensitivity

Like any antihypertensive, use with caution in severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

**work/play**—normal hemodynamic responses to exercise maintained.

**love**—low incidence of impotence and/or loss of libido:  
2.8% in 1,923 patients studied.<sup>1</sup>

**cardiac output**—tends to return to control values during long-term therapy.

**blood flow**—preserved in kidney.

*No Single Advantage Determines Drug Choice.*

Other factors must include:

The drug's effectiveness in a given patient, its side effects, warnings, precautions, tolerance, etc. A rational therapeutic choice depends on a careful assessment of all such factors.

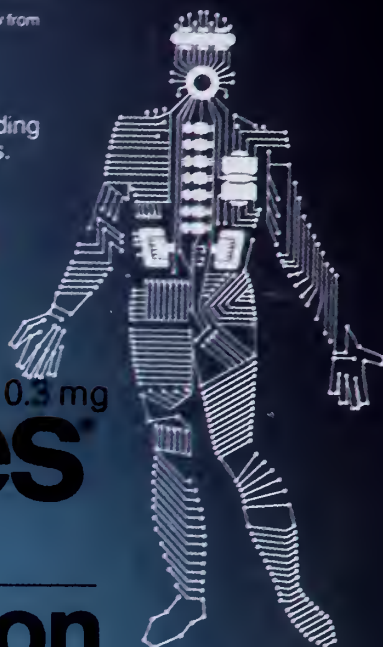
\*Central alpha-adrenergic stimulation decreases sympathetic outflow from the brain, as shown in animal studies.

<sup>1</sup> Data on file at Boehringer Ingelheim Ltd.

Please see last page for brief summary, including warnings, precautions, and adverse reactions.

**Now available in new  
0.3 mg tablets**

Tablets of 0.1, 0.2, 0.3 mg  
**Catapres**  
(clonidine HCl)  
**Hypertension**

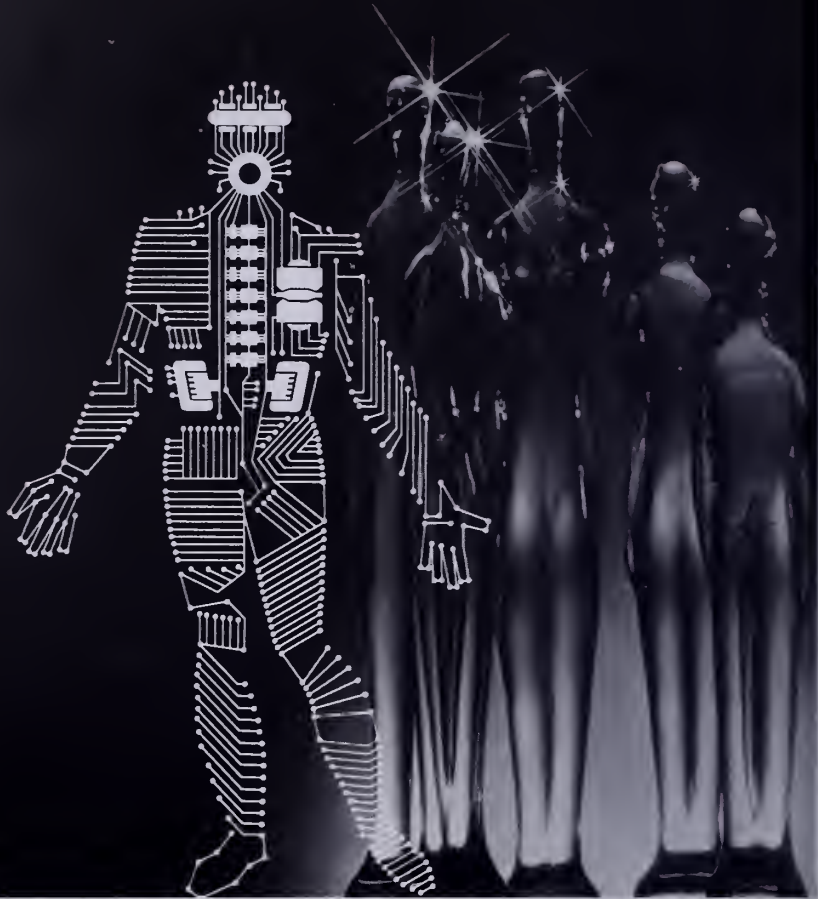




# The Alpha Advantage:

It's for all kinds of hypertensives

Tablets of 0.1, 0.2, 0.3 mg  
**Catapres**  
(clonidine HCl)  
**Hypertension**



- No contraindications.
- Effective in all degrees of hypertension. It is mild to moderate in potency.
- Low incidence of depression, impotence, orthostatic hypotension—no fatal hepatotoxicity.
- Preserves kidney blood flow.

Most common side effects are dry mouth, drowsiness, and sedation which generally tend to diminish with time.

**Catapres®**  
(clonidine hydrochloride)  
Tablets of 0.1, 0.2, 0.3 mg

**Indication:** The drug is indicated in the treatment of hypertension. As an anti-hypertensive drug, Catapres (clonidine hydrochloride) is mild to moderate in potency. It may be employed in a general treatment program with a diuretic and/or other antihypertensive agents as needed for proper patient response.

**Warnings:** Tolerance may develop in some patients necessitating a reevaluation of therapy.

**Usage in Pregnancy:** In view of embryotoxic findings in animals, and since information on possible adverse effects in pregnant women is limited to uncontrolled clinical data, the drug is not recommended in women who are or may become pregnant unless the potential benefits outweigh the potential risk to mother and fetus.

**Usage in Children:** No clinical experience is available with the use of Catapres (clonidine hydrochloride) in children.

**Precautions:** When discontinuing Catapres (clonidine hydrochloride), reduce the dose gradually over 2 to 4 days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients should be instructed not to discontinue therapy without consulting their physician. Rare instances of hypertensive encephalopathy and death have been recorded after cessation of clonidine hydrochloride therapy. A causal relationship has not been established in these cases. It has been demonstrated that an excessive rise in blood pressure, should it occur, can be reversed by resumption of clonidine hydrochloride therapy or by intravenous phentolamine. Patients who engage in potentially hazardous activities, such as operating machinery or driving, should be advised of the sedative effect. This drug may enhance the CNS-depressive effects of alcohol, barbiturates and other sedatives. Like any other agent lowering blood pressure, clonidine hydrochloride should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

As an integral part of their overall long-term care, patients treated with Catapres (clonidine hydrochloride) should receive periodic eye examinations. While, except for some dryness of the eyes, no drug-related abnormal ophthalmologic findings have been recorded with Catapres (clonidine hydrochloride), in several studies the drug produced a dose-dependent increase in the incidence and severity of

The usual starting dose of Catapres is 0.1 mg at breakfast and 0.1 mg at bedtime. Some patients may benefit from a starting dose of 0.1 mg at bedtime.

Usual daily dose range—0.2—0.8 mg

Maximum daily dose—2.4 mg  
Doses as high as this have rarely been employed.

For optimal results, the dose of Catapres must be adjusted according to the patient's individual blood pressure response.

spontaneously occurring retinal degeneration in albino rats treated for 6 months longer.

**Adverse Reactions:** The most common reactions are dry mouth, drowsiness, sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In many instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormal liver function tests; one report of possible drug-induced hepatitis without jaundice and hyperbilirubinemia in a patient receiving clonidine hydrochloride, thalidomide and papaverine hydrochloride. Weight gain, transient elevation of glucose, or serum creatine phosphokinase; congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes; nervousness, restlessness, anxiety and mental depression. Also rare: gynecologic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness or burning of the eyes, dryness of the nasal mucosa, pallor, gynecologic weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.

**Overdosage:** Prolonged hypotension, weakness, somnolence, diminished reflexes and vomiting followed the accidental ingestion of Catapres (clonidine hydrochloride) by several children from 19 months to 5 years of age. Gastric lavage and administration of an analeptic and vasopressor led to complete recovery within 24 hours. Tolazoline in intravenous doses of 10 mg at 30-minute intervals usually abolishes all effects of Catapres, (clonidine hydrochloride) overdose.

**How Supplied:** Catapres, brand of clonidine hydrochloride, is available as (tan) and 0.2 mg (orange) oval, single-scored tablets in bottles of 100 and 1000 available as 0.3 mg (peach) oval, single-scored tablets in bottles of 100.

For complete details, please see full prescribing information.  
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Ridgefield, CT 06877**



## President's Message



Luther L. Hill, M.D.  
President

## Salute To County Officers

Our county medical society officers are an important segment of our state organization. Their true value has never been appreciated.

These men and women are the leaders in their areas. The respect and high regard in which they are held by their fellow physicians has resulted in their election to these positions, and these county officers have demonstrated their interest in the Association by agreeing to serve.

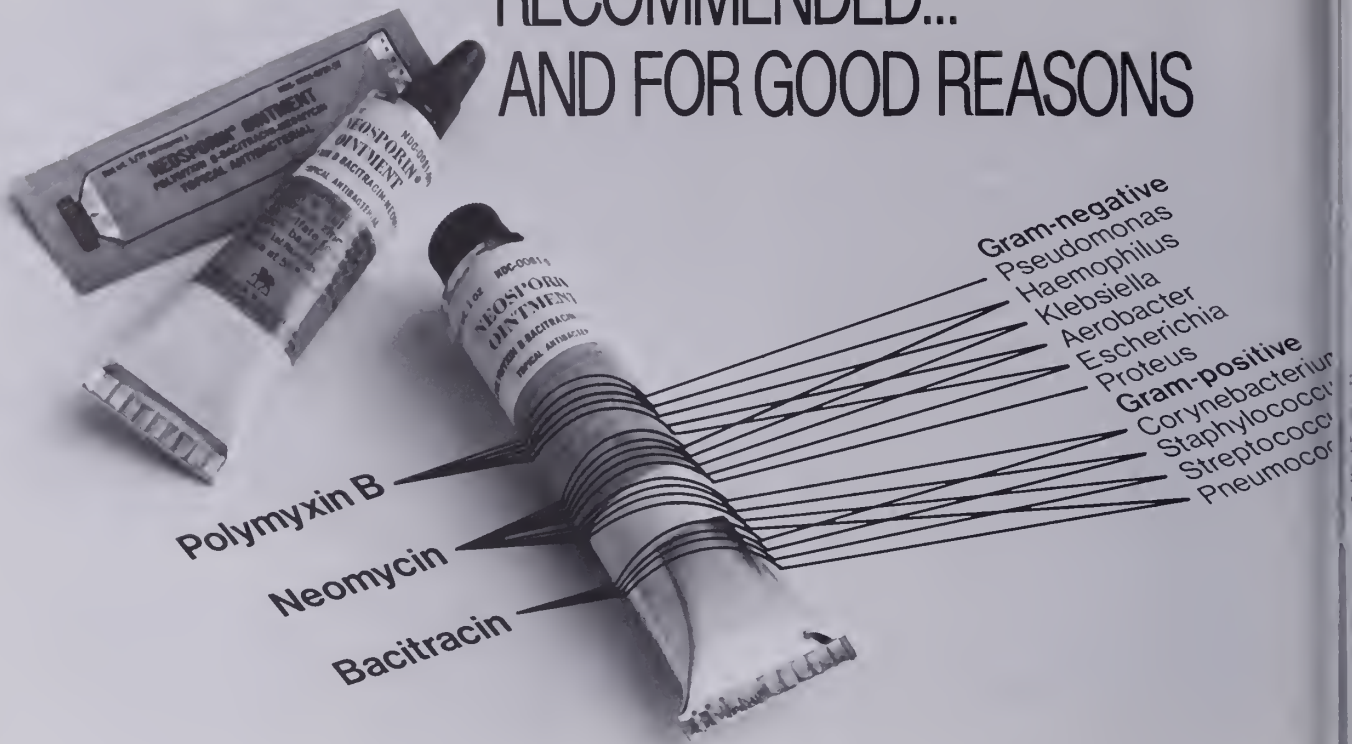
We need to better integrate this group into the state organization. We need their ideas and their guidance. They need the state organization's help in coordinating their county activities.

A reception and luncheon is being planned for the county society officers at the annual meeting in April in Montgomery.

We hope that an organization can be developed from this meeting which will insure continuity. This group has much to offer in influencing the policies of the Association and in shaping the direction of its course.

*Luther Hill*

# IT'S HIGHLY RECOMMENDED... AND FOR GOOD REASONS



1. provides broad-spectrum, overlapping antibacterial effectiveness against common susceptible pathogens, including staph and strep
2. helps prevent topical infections, and treats those that have already started
3. it's good medicine for abrasions, lacerations, open wounds, primary pyodermas, secondarily infected dermatoses; and it's painless and cosmetically pleasing
4. contains three antibiotics that are rarely used systemically
5. you can recommend it in any of the three convenient package sizes: 1 oz tube, 1/2 oz tube, or the versatile, single-use foil packet

## NEOSPORIN® Ointment

(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs, in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

**PRECAUTIONS:** As with other antibacterial preparations,

prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML



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selected  
by NASA for  
the Apollo and  
Skylab missions



# North Alabama Perinatal Center

Colin Campbell, M.D.

Dean, UAH School of Primary Medical Care

Further reduction of the infant mortality rate in Alabama continues to be a top priority for those of us in the state who are involved with the health care of mothers and children.

Dr. Robert Goldenberg, Director of the State Bureau of Maternal and Child Health, views the steady decline in the infant death rate in the state—from 20 deaths per thousand births in 1976 to an estimated 1979 average of less than 15 deaths per thousand—simply as a spur to further improvement.

For both humanitarian and economic reasons, it is in the best interests of all the people of Alabama to try to give all babies born in the state a stable, healthy start in life.

In the early 1970's a number of concerned groups in Alabama, including the Alabama Chapter of the American Academy of Pediatrics, the Health Services Commission of the Legislature, the Alabama Regional Medical Program, the University of Alabama School of Medicine, and MASA, cooperated in developing a statewide plan to reduce infant deaths.

Since the incidence of death and serious illness among newborns tends to be highest in rural areas in this state, a regionalized approach to better infant health was the cornerstone of this plan. In District I, (the 13 northern Alabama counties of Colbert, Cullman, DeKalb, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, Morgan, and Winston), Huntsville Hospital was designated as the Regional Neonatal Intensive Care Center because of its accessibility to the rest

of northern Alabama and the large number of deliveries performed there. In October of 1973, the intensive care nursery at Huntsville Hospital (the only Level III nursery in northern Alabama) officially began its work under the direction of northern Alabama's first neonatologist, Dr. M. Jean Quirante, who had come to Huntsville in August as a faculty member of the new UAH School of Primary Medical Care.

From the schools's beginning in 1973, reduction of infant mortality and morbidity in the region has been a foremost concern of the SPMC faculty, especially those in obstetrics/gynecology and pediatrics. With the appointment in 1976 of Dr. Bruce A. Harris as the first full-time Chairman for Obstetrics and Gynecology Programs, the logical next step in improving neonatal care in northern Alabama became feasible.

Obstetrician/gynecologists and pediatricians on the School of Primary Medical Care faculty worked with Dr. Robert Goldenberg and faculty at the School of Medicine in Birmingham to develop the North Alabama portion of a state-wide regionalized perinatal program. When funding by the State Legislature became available in 1978, the North Alabama Perinatal Center was already staffed and functioning.

## No. 6 To Open

The state has continued to provide partial support for the regional perinatal centers in Huntsville, Birmingham, Mobile, Montgomery, and since last fall, Tuscaloosa. Alabama's sixth regional perinatal

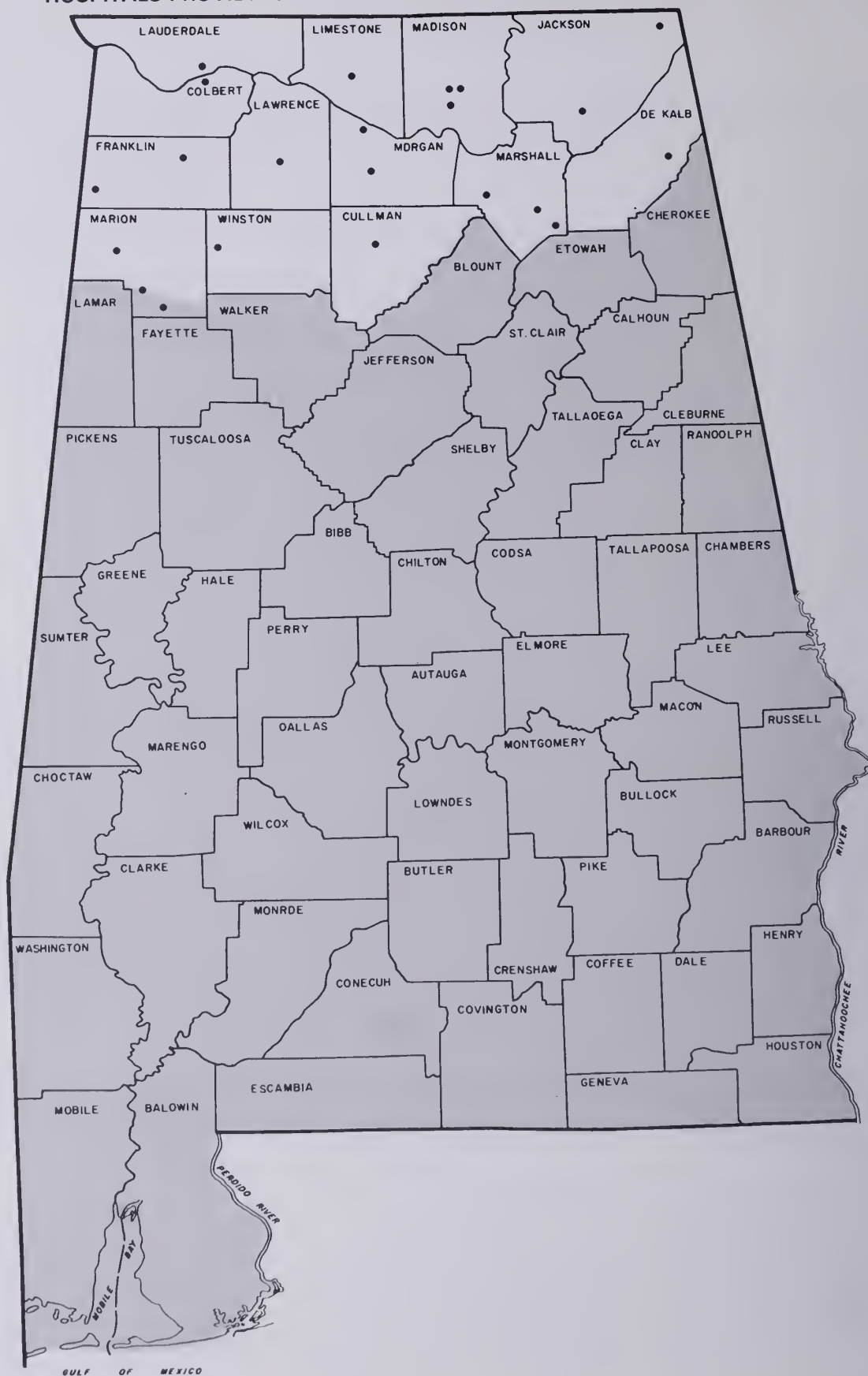
center, in the Gadsden-Anniston area, is to open by the end of this fiscal year.

The perinatal centers have been established to provide obstetric care for high-risk patients and to reduce infant deaths throughout the state by increased regionalization of perinatal care, improved education for health professionals, development of a better statistical data base, and follow-up assessment to aid in prevention of future high-risk pregnancies. The goal for the physician education segment of the grant is to increase professional expertise in utilizing equipment and in performing new techniques in obstetrics and neonatology.

The bulk of the North Alabama Perinatal Center's share of the appropriation goes for the salaries of the two Perinatal Educators and the Perinatal Secretary. Nan Hamner, R.N., B.S.N., Perinatal Educator-Obstetrics, and Susan Scruggs, R.N., B.S.N., Perinatal Educator-Nursery, do most of the educational outreach work of the North Alabama Perinatal Center. Additional costs include educational materials, supplies, and travel. The two nurses average 600 miles and three days on the road each week in reaching the 22 northern Alabama hospitals in which they present instructional programs (Map 1).

The University of Alabama in Huntsville School of Primary Medical Care and the Huntsville Hospital provide the consulting services of the Center's two physician Co-directors, Dr. John A. DiPlacido for obstetrics and Dr. Jean Quirante for pediatrics, and of other Ob/Gyn and pediatrics faculty, particularly the

# HOSPITALS PROVIDING PERINATAL CARE IN NORTH ALABAMA





**NEW**  
PRODUCT  
INFORMATION

clinical significance



of constipation



**WILLIAM H. RORER, INC.**  
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# Constipation acute or chronic

Constipation may be caused by conditions affecting the filling and emptying of the rectum.

## Inadequate filling

Interference in propulsive  
contractions

Impairment of smooth  
muscle contractility

Obstruction of the lumen



## Inadequate emptying

Interference in the stimulation of the  
defecation reflex

## An additional complication

Self treatment—use and abuse of  
laxatives

**Treatment of underlying disorders is critical...  
Relief of constipation is essential**



# Perdiem™...distinctive!

A unique blend of natural vegetable derivatives  
For comfortable and safe relief of constipation

## Psyllium

- A natural source of hydropillic callaids
- Strengthens stimulus to defecate by increasing indigestible residue
- Helps produce soft, hydrated, well formed stool



## A unique granular formulation

- No mixing or chewing
- Granules are placed in mouth and swallowed with full glass of beverage
- Helps break cathartic habituation
- Helps establish normal defecatory reflexes and regular bowel rhythm

## Senna

- Produces mild peristaltic stimulation
- Helps propel bulk through colon

John Maerz, M.D.  
Medical Director  
W. H. Rorer, Inc.  
Fort Washington, PA 19034

Dear Dr. Maerz:

Yes, I would like to receive a supply of Perdiem™ starter samples for my patients.

Dr. \_\_\_\_\_

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# New Perdiem™

## Prescribing Information

**ACTIONS:** Perdiem™, with its gentle action, does not produce disagreeable side effects. The vegetable mucilages of Perdiem™ soften the stool and provide pain-free evacuation of the bowel. Perdiem™ is effective as an aid to elimination for the hemorrhoid or fissure patient prior to and following surgery.

**COMPOSITION:** Natural vegetable derivatives: A unique blend of psyllium and senno (Plantago Hydrocolloid with Cassia Pod Concentrate).

**INDICATION:** For relief of constipation.

**PATIENT WARNING:** Should not be used in the presence of undiagnosed abdominal pain. Frequent or prolonged use without the direction of a physician is not recommended. Such use may lead to laxative dependence.

**DIRECTIONS FOR USE—ADULTS:** Before breakfast and after the evening meal, one to two rounded teaspoonfuls of Perdiem™ granules should be placed in the mouth and swallowed with a full glass of warm or cold beverage. Perdiem™ granules should not be chewed. After Perdiem™ takes effect (usually after 24 hours, but possibly not before 36-48 hours); reduce the morning and evening doses to one rounded teaspoonful. Subsequent doses should be adjusted after adequate laxation is obtained.

**IN OBSTINATE CASES:** Perdiem™ may be taken more frequently, up to two rounded teaspoonfuls every six hours.

**FOR PATIENTS HABITUATED TO STRONG PURGATIVES:** Two rounded teaspoonfuls of Perdiem™ in the morning and evening may be required along with half the usual dose of the purgative being used. The purgative should be discontinued as soon as possible and the dosage of Perdiem™ granules reduced when and if bowel tone shows lessened laxative dependence.

**FOR COLOSTOMY PATIENTS:** To ensure formed stools, give one to two rounded teaspoonfuls of Perdiem™ in the evening with warm liquid.

**DURING PREGNANCY:** Give one to two rounded teaspoonfuls each evening.

**FOR CLINICAL REGULATION:** For patients confined to bed, for those of inactive habits, and in the presence of cardiovascular disease where straining must be avoided, one rounded teaspoonful of Perdiem™ taken once or twice daily will provide regular bowel habits. Take with a full glass of water or beverage.

**FOR CHILDREN:** From age 7—11 years, give one rounded teaspoonful one to two times daily. From age 12 and older, give adult dosage.

**NOTE:** It is extremely important that Perdiem™ should be taken with a plentiful supply of liquid.

**HOW SUPPLIED:** Granules; 100 gram (3.5 oz.) and 250 gram (8.8 oz.) containers.



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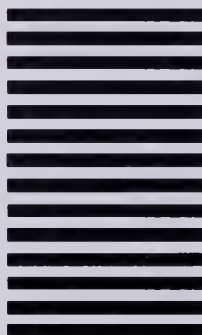
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Attn: Marketing Services



respective program chairmen, Dr. George W. Corner, Jr., and Dr. John R. Montgomery, who are vitally interested in the Center's work.

Legislative Action

It should be emphasized that despite the considerable extent of in-kind contributions by both Huntsville Hospital and the UAH School of Primary Medical Care, the work of the North Alabama Perinatal Center is made possible by the two recent legislative appropriations through the State Bureau of Maternal and Child Health, and by grants from the Bureau, the Alabama Regional Medical Program, and the Appalachian Regional Commission, together with numerous contributions from individuals and groups in the region.

It is worth reviewing what the people of Alabama have received for their money and efforts, particularly in the rural areas of the 13 counties the North Alabama Perinatal Center serves. The basic aim of a regionalized health care program is to make the best use of available resources, both human and technological. Since it became operational in June of 1978, the North Alabama Perinatal Center has served the physicians and the more than 700,000 people of North Alabama by providing:

1. The first comprehensive survey of perinatal resources and needs in the 13 North Alabama counties. This survey was conducted and completed in 1978 by Ms. Scruggs and by Sheron Jones Salyer, R.N., B.S.N., who served as Obstetrics Perinatal Educator until June, 1979.

2. Neonatal transports. Transports of newborns from northern Alabama and southcentral Tennessee to the nursery at Huntsville Hospital have totaled about 1,100 from 1972 through 1979.

3. Maternal transports. Transports of infants *in utero*, which began in May, 1978, totaled 86 through December, 1979 (Table 1).

4. Workshops for nurses, physicians, and other perinatal personnel in 22 hospitals covering all the counties in District I (Tables 2 & 3 and Map 1).

HOSPITALS PROVIDING PERINATAL CARE IN NORTH ALABAMA		
LAUDERDALE	ETOWAH	RANDOLPH
LIMESTONE	BLOUNT	BIBB
MADISON	LAMAR	GREENE
JACKSON	WALKER	HALE
COLBERT	CALHOUN	CHILTON
LAWRENCE	FAYETTE	COOSA
FRANKLIN	ST. CLAIR	TALLAPOOSA
MORGAN	JEFFERSON	CHAMBERS
DE KALB	TALLADEGA	SUMTER
MARSHALL	CLEBURNE	PERRY
MARION	PICKENS	ELMORE
WINSTON	TUSCALOOSA	LEE
CULLMAN	SHELBY	AUTAUGA
CHEROKEE	CLAY	

5. Seminars and workshops at Huntsville Hospital and the School of Primary Medical Care for nurses and physicians.

6. Ultrasound evaluation and amniocentesis for patients referred by family physicians and obstetricians in North Alabama.

7. Phone consultations for referring physicians by faculty of the School of Primary Medical Care.

8. Quarterly North Alabama Perinatal Center Newsletter. Prepared and distributed by the Huntsville Hospital's Public Relations Department, this newsletter is an important means of communication for the program, which involves many people in a number of locations.

The success of the North Alabama Perinatal Center outreach program in working with hospitals across the northern part of the state is in large due to the enthusiasm of the staffs of the hospitals. Participation in the workshops held by the Perinatal Educators requires a considerable amount of extra work and time on the part of the nurses, particularly when the workshops are held at Huntsville rather than in the local hospitals.

Nevertheless, the monthly workshops at Huntsville Hospital are booked to capacity through May of 1980, with more nursing personnel applying than can be enrolled.

The response is still more impressive in view of the duration of these workshops—three days each for Care of the Obstetrical Patient and Care of the Normal Newborn and four days each for Care of the High Risk Obstetrical Patient and Care of the Sick Newborn.

TABLE 1  
MATERNAL TRANSPORTS  
MAY, 1978 THROUGH  
DECEMBER, 1979

Albertville	27
Athens	10
Bridgeport	2
Centre	1
Cherokee	1
Decatur	2
Florence	1
Fort Payne	7
Guntersville	8
Haleyville	1
Jasper	1
Moulton	1
Rainsville	1
Red Bay	3
Scottsboro	5
Sheffield	8
Stevenson	2
Tuscumbia	5
Total:	86

TABLE 2

## HOSPITALS PROVIDING PERINATAL CARE IN NORTH ALABAMA

COUNTY	HOSPITAL	LOCATION
Colbert	Helen Keller Memorial Hospital	Sheffield
Cullman	Cullman County Hospital	Cullman
DeKalb	Baptist Medical Center	Ft. Payne
Franklin	North Alabama Hospital	Russellville
	Red Bay Hospital	Red Bay
Jackson	Jackson County Hospital	Scottsboro
	North Jackson County Hospital	Bridgeport
Lauderdale	Eliza Coffee Memorial Hospital	Florence
Lawrence	Lawrence County Hospital	Moulton
Limestone	Athens-Limestone Hospital	Athens
Madison	Huntsville Hospital	Huntsville
	Medical Center Hospital	Huntsville
	Fox Army Hospital	Redstone Arsenal
Marion	Rankin-Fite Memorial Hospital	Winfield
	Lister Hill Hospital	Hamilton
	Guin Hospital	Guin
Marshall	Boaz-Albertville Hospital	Boaz
	Guntersville Hospital	Guntersville
	Arab Hospital	Arab
Morgan	Decatur General Hospital	Decatur
	Pineview Hospital	Hartselle
Winston	Burdick-West Memorial Hospital	Haleyville

## The Hub

Just as Huntsville Hospital and the School of Primary Medical Care are the hub of an information and service network encompassing the 13 North Alabama counties and beyond, so each local hospital and physician's office in turn is a center of services that include the region's rural population. Thus, Map 1 does not begin to show all the locations that the North Alabama Perinatal Center serves.

Flexibility and versatility are essential in a regional health care program. Each hospital has its own problems that require solutions tailored to its location and functions; every physician participating in the program selects the services he or she needs.

The obstetrician/gynecologist or the pediatrician with an established practice may use the North Alabama Perinatal Center mainly for transports of high risk patients that the local hospital is not equipped to manage:

A frequent comment by family physicians, pediatricians, and

## An apple a day won't keep alcoholism away!

The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

Do you have a patient who needs this kind of help? You probably do because the illness is sneaky. For more information and guidelines on how to identify these patients, write to us.

*Willingway Hospital*

311 JONES MILL ROAD  
STATESBORO, GA. 30458

(912) 764-6236

J.C.A.H. ACCREDITED



**TABLE 3****PERINATAL WORKSHOPS AVAILABLE FOR  
NORTH ALABAMA HOSPITALS  
SEPTEMBER 1979 - MAY 1980****OBSTETRICS**

Continuous Electronic Fetal Monitoring  
Assessment of the Labor Patient  
Assessment of the High Risk Obstetrical Patient  
Realtime Ultrasound  
Parent-Infant Bonding  
Parent-Infant Bonding with the High Risk Pregnancy  
Diabetes in Pregnancy  
Pre-eclampsia, Eclampsia  
Premature Rupture of Membranes, Premature Labor  
Non-stress, Stress Testing  
Antepartum Testing  
Drugs used in Labor and Delivery, Maternal/Fetal Effects

**NEONATAL**

Resuscitation of the Newborn  
Transport of the High Risk Infant  
Assessment of the Newborn  
Nursery Infection Control  
Gestational Age  
Parent-Infant Bonding  
Neonatal Jaundice  
Respiratory Distress Syndrome  
Assisting with an Umbilical Catheterization  
Steps in Starting a Peripheral I.V.  
I.V. Therapy in Infant Nutrition, Tube Feeding  
Neonatal Sepsis  
Neutral Thermal Environment  
Parenting Skills

Center's work as residents on the receiving end—treating maternal and neonatal transports in Huntsville—and on the referring end when serving their rural preceptorship in a family physician's office in a small community.

By the time these young doctors complete their residencies, they are familiar with how the North Alabama Perinatal Center can assist them in rural practice.

In the words of a June '79 graduate of the Huntsville residency who is practicing in the northeastern corner of Alabama:

"I have a lot of rural patients—not just from all over this county, but from southeastern Tennessee and northwestern Georgia. There's nothing like knowing you have people to talk with and to send patients to—it gives you peace of mind. I get good feedback from the medical school and the hospital on the patients I refer, so I learn. I couldn't think of doing obstetrics up here without the North Alabama Perinatal Center."

The regional perinatal center helps to meet a highly significant need in North Alabama and is an excellent example of effective cooperation between different parts of the health care system.

obstetrician/gynecologists who work with the Center is the importance of having a regional referral center closer than Nashville or Birmingham. The increasing number of telephone consultations with physicians at the Huntsville Hospital and the SPMC is a reflection of the value of the perinatal center.

**By Phone**

These quick, convenient phone consultations with faculty physicians are particularly reassuring and helpful to recent graduates of the family practice residency programs in Huntsville and Tuscaloosa who now are practicing in North Alabama.

Graduates of the UAH-Huntsville Hospital Family Practice Residency Program have participated in the



**Attend  
MASA  
Annual Meeting  
April 17-19  
Montgomery, Ala**

# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**FAMILY PRACTICE:** Age 51; Cornell University, 1954; American Board Certified; seeking practice in single specialty group, research or institutionally based. Available July 1980. LW-20020.

...

**GENERAL PRACTICE:** Age 27; Wisconsin, 1977; American Board Eligible in 1980; seeking practice in industrial, institutional or private or government clinic preferably in the Birmingham area. Available July 1980. LW-020680.

...

**GENERAL PRACTICE/INTERNIST/EMERGENCY MEDICINE:** Age 31; Washington University; American Board Eligible in 1980; seeking practice in specialty, multi-specialty, general or emergency medicine preferably near Birmingham and/or Montgomery in a town with a population of 250,000 up to 1 million. Available July 1980. LW-020780.

...

**INTERNAL MEDICINE:** Age 32; University of Alabama, 1975; seeking practice preferably in the Mobile area in internal medicine. Available 1980. LW-010280.

...

**INTERNAL MEDICINE:** Age 33; Louisiana State, 1976; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group, or partnership. Available October 1980. LW-20306.

...

**INTERNAL MEDICINE:** Age 32; South Carolina, 1973; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, or partnership. Available February 1980. LW-19765.

...

**INTERNAL MEDICINE/PULMONARY:** Age 35; Prince of Wales, 1969; American Board Certified; seeking practice in general, specialty, associate or institutional in a town with a population of 10,000 plus. Available July 1980. LW-11029.

...

**NEUROLOGY:** Age 41; Medical College of Calicut, 1965; seeking practice in specialty, group, multi-specialty group or institutional in a medium sized town preferably in Tuscaloosa, Jasper, Ft. Payne or Prattville. Available September 1980. LW-100279.

...

**OBSTETRICS AND GYNECOLOGY:** Age 33; University of Texas, 1973; American Board Eligible; seeking practice in single specialty group, multi-specialty group or partnership. Available August 1980. LW-21032

...

**OBSTETRICS AND GYNECOLOGY:** Age 29; B. J. Medical College, 1972; seeking practice in

specialty, assistant or associate, or multi-specialty group in a town with a population of 10,000 or more. Available July 1980. LW-110379.

...

**OPHTHALMOLOGY:** Age 32; Kansas, 1974; American Board Eligible in 1980; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

...

**PATHOLOGY, CLINICAL:** Age 32; Emory, 1974; American Board Certified in Pathology; seeking practice in partnership, single specialty group, or institutionally based. Available August 1980. LW-20879.

...

**PATHOLOGY, CLINICAL:** Age 62; Michigan, 1943; American Board Certified in Pathology, seeking practice in institutionally based or research. Available October 1980. LW-20071.

...

**PEDIATRICS/GENERAL PRACTICE:** Age 42; Greiburg, West Germany, 1967; seeking practice in general, specialty, assistant or associate in the central part of Alabama in a town with a population not less than 8,000. LW-020880.

**PEDIATRICIAN:** Age 29; University of Alabama, 1975; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, and/or partnership in a medium-sized or larger town, preferably between 20,000 to 80,000 population. Available November 1980. LW-120279.

...

**PEDIATRICS:** Age 29; University of Alabama, 1975; seeking practice in specialty preferably in Birmingham or in a town with a population of 200,000. Available September 1980. LW-010180.

...

**PEDIATRICS:** Age 31; Downstate Medical College, 1972; American Board Certified; seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110779. (See LW-11087)

...

**SURGERY, GENERAL:** Age 32; Downstate Medical College, 1972; American Board Eligible; seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110879. (See LW-110779)

## PHYSICIANS WANTED (Opportunities for Practice)

**FAMILY PRACTITIONER**—to associate with Family Physician. An excellent opportunity to establish a group in a new well equipped building located in the growing area of Mobile, Alabama. PW-020180.

...

**FAMILY PHYSICIAN**—Opportunity for physician to enter Group Practice for Primary Care. Recently obtained Robert Wood Johnson Grant which will last for 4 years. New clinic building presently being constructed with facilities for 4 physicians and plans to add on if needed. Small town atmosphere with good schools and churches; immediately joining a large city with regional medical center and many specialists. One hour from Birmingham and 1 1/2 hours from Atlanta. If interested, invitation to visit with expenses paid will be extended to those who qualify. PW-020280.

...

**FAMILY PHYSICIAN OR INTERNAL MEDICINE**—Progressive N. E. Alabama Community—Join four-man Primary Care Group; new clinic under construction; salary, no expense to physicians. Scheduled hours with time for vacation, leisure and personal interests. PW-020380.

...

**FAMILY PRACTICE, INTERNIST, SURGEON**—Multi-Specialty Group new forming adjacent to hospital. Need Family Practice, Internist, Surgeon. Central Alabama city of 40,000 trade area. Fastest growing area in south. Accredited schools, balanced

economy, cultural and recreational opportunities galore. Area lakes for fishing, camping, water sports. Hunting for deer, turkey, dove, quail, squirrel. City of 200,000 15 miles away via Interstate. PW-020480.

...

**GENERAL PRACTITIONER**—Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

...

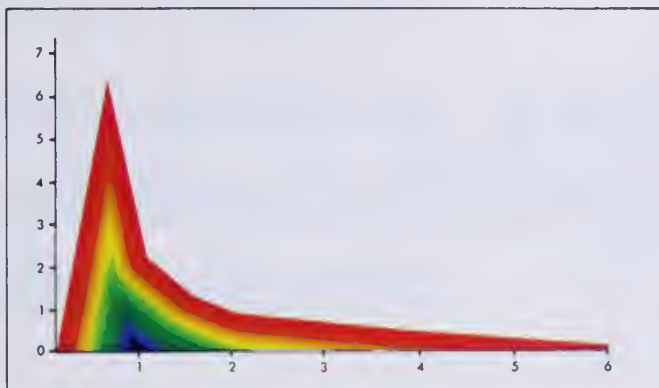
**PEDIATRICIAN**—Wanted to join Board Certified, established practicing pediatrician with extensive practice in general pediatrics, pediatric allergy, consulting pediatrics. Outstanding geographic, economic and professional opportunity. Minimal night & weekend work due to cooperative arrangements. PW-100479.

...

**STUDENT HEALTH**—FULL TIME Comprehensive primary care. 9 M.D.'s, 16,000 students. Excellent fringes include liability insurance and military credit for retirement. Competitive salary. Delightful university town of Tuscaloosa. BNDD required. PW-020580.

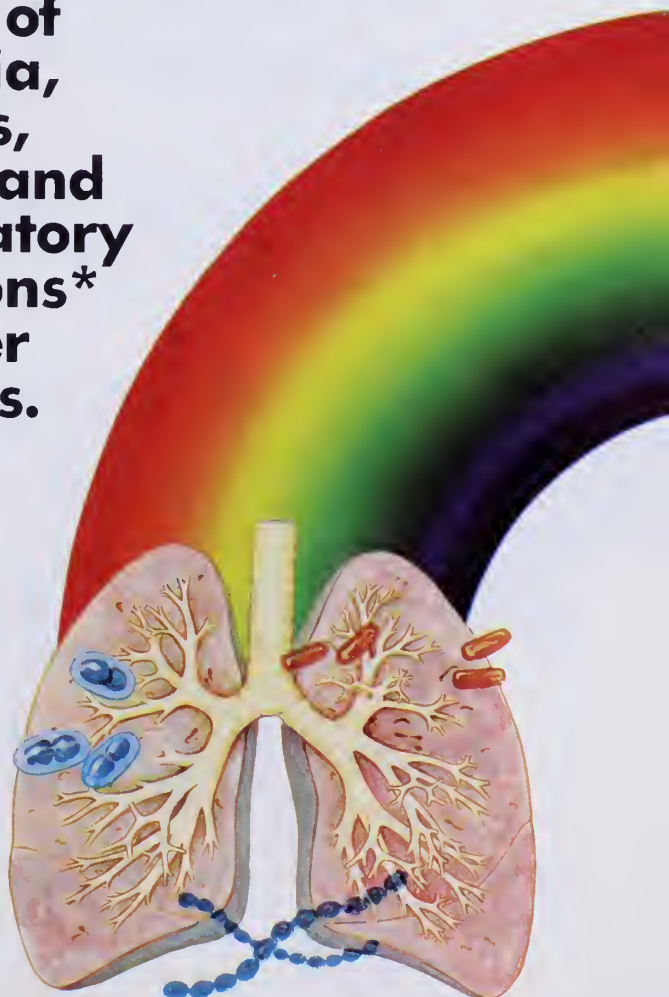


more  
than just spectrum



New **CYCLAPEN**<sup>®</sup>  
(cyclacillin) Tablets/  
Suspension

**Efficacy  
proven in the  
treatment of  
otitis media,  
bronchitis,  
pneumonia and  
upper respiratory  
tract infections\*  
with fewer  
side effects.**



\*Due to susceptible organisms  
(See important information on last page.)

# New **CYCLAPEN**<sup>®</sup> (cyclacillin) Tablets/ Suspension

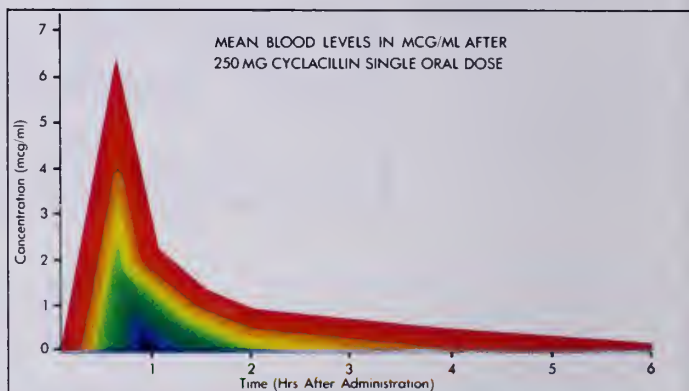
## efficacy with fewer side effects than ampicillin confirmed in studies of 2,581

Rapid, virtually complete  
absorption from GI tract

Rapid onset of action—  
mean peak serum levels  
within 30 minutes

Exceptionally high peak  
blood levels—3 times  
greater than ampicillin  
(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



Clinical efficacy of CYCLAPEN<sup>®</sup> in otitis media<sup>†</sup>

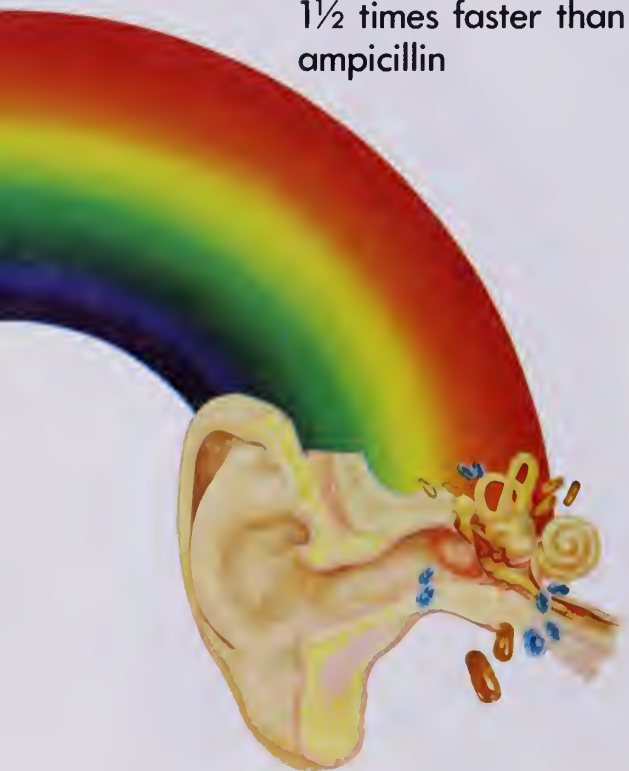
Causative Organism		No. of Patients
<i>S. pneumoniae</i>	96	82
	95	
<i>H. influenzae</i>	88	96
	85	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

## more than just spectrum in otitis media

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.

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# effects than double-blind patients\*



Fewer side effects with CYCLAPEN<sup>®</sup> in double-blind studies to date<sup>1,2</sup>

Total number of drug-related side effects in all patients		
CYCLAPEN <sup>®</sup>	128 of 1,286	(10%) of patients
ampicillin	202 of 1,129	(18%) of patients
Difference statistically significant (P < 0.001)		

CYCLAPEN<sup>®</sup> (cyclacillin)  
Effective for otitis media<sup>†</sup> in children

- Excellent clinical results in eliminating the two most common causative organisms in otitis media
- Significantly lower incidence of diarrhea and skin rash in children treated with CYCLAPEN<sup>®</sup> Suspension

	diarrhea	rash
CYCLAPEN	9.1%	2.1%
ampicillin	19.2%	5.8%
	P < 0.001	P < 0.03

1. Gold JA, Hegarty CP, Deitch MW, Wolker BR: Double-blind clinical trials of oral cyclocillin and ampicillin, *Antimicrob Ag Chemother* 15:55-58, (Jan.) 1979.

2. Data on file, Wyeth Laboratories.

(See important information on next page.)

## In bronchitis, pneumonia and upper respiratory tract infections<sup>†</sup>

High cure rate with CYCLAPEN <sup>®</sup>		
Causative Organism	Bronchitis/Pneumonia <sup>†</sup>	No. of Patients
<i>S. pneumoniae</i>	100	73
	95	
Chronic Branchitis <sup>†</sup> (acute exocerbotion)		
<i>H. influenzae</i>	92	12
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>	
Streptococcol Sore Throat <sup>†</sup>		
Group A beta-hemolytic Streptococcus	100	44
	86	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

more than  
just spectrum  
**CYCLAPEN<sup>®</sup>**  
(cyclacillin) Tablets/  
Suspension

**Wyeth Laboratories**  
Philadelphia, Pa 19101



New from Wyeth Laboratories

# CYCLAPEN®

(cyclacillin) Tablets/  
Suspension



## more than just spectrum in otitis media, bronchitis, pneumonia, and upper respiratory tract infections\*

- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes
- Exceptionally high peak blood levels—3 times greater than ampicillin (clinical efficacy may not always correlate with blood levels)
- Rapidly excreted unchanged in the urine—1½ times faster than ampicillin
- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date
- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients
- New CYCLAPEN® Suspension—great-tasting raspberry punch flavor

\*Due to susceptible organisms.

### How Supplied

CYCLAPEN® (cyclacillin) tablets:  
250 mg scored tablets  
500 mg scored tablets

#### Indications

Cyclapen® (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below

Cyclapen® is indicated for the treatment of the following infections.

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci  
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)

Otitis Media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*

Acute exacerbation of chronic bronchitis caused by *H. influenzae*\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis* (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections.)

NOTE: Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing

#### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins.

#### Warnings

CYCLACILLIN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT

CYCLACILLIN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS

SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN

ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN BEFORE THERAPY WITH A PENICILLIN. CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED

#### Precautions

Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken

PREGNANCY: Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman.

#### Adverse Reactions

The oral administration of cyclacillin is generally well tolerated

As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

Usual children's dosage: 50 to 100 mg/kg/day in equally spaced doses, depending on severity.

### CYCLAPEN® (cyclacillin) for oral suspension

125 mg per 5 ml:

100 ml and 200 ml bottles

250 mg per 5 ml:

100 ml and 200 ml bottles

hypersensitivity to penicillins or in those with a history of allergy, asthma, hay fever, or urticaria

The following adverse reactions have been reported with the use of cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported (See WARNINGS)

Other less frequent adverse reactions which may occur and that have been reported during therapy with other penicillins are: anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

#### Dosage and Administration

INFECTION*	ADULTS	CHILDREN
Respiratory Tract Infections & Pharyngitis**	250 mg q.i.d. in equally spaced doses	Dosage should not result in a dose higher than that for adults. body weight <20 kg (44 lbs) 125 mg q.i.d. in equally spaced doses body weight >20 kg (44 lbs) 250 mg q.i.d. in equally spaced doses
Bronchitis and Pneumonia	Mild or Moderate Infections: 250 mg q.i.d. in equally spaced doses Chronic Infections: 500 mg q.i.d. in equally spaced doses	50 mg/kg/day q.i.d. in equally spaced doses 100 mg/kg/day q.i.d. in equally spaced doses
Otitis Media	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Skin & Skin Structures	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Urinary Tract	500 mg q.i.d. in equally spaced doses	100 mg/kg/day in equally spaced doses

#### INFECTION\*

#### ADULTS

#### CHILDREN

Dosage should not result in a dose higher than that for adults.

body weight <20 kg (44 lbs) 125 mg q.i.d. in equally spaced doses  
body weight >20 kg (44 lbs) 250 mg q.i.d. in equally spaced doses

50 mg/kg/day q.i.d. in equally spaced doses  
100 mg/kg/day q.i.d. in equally spaced doses

50 to 100 mg/kg/day in equally spaced doses depending on severity

50 to 100 mg/kg/day in equally spaced doses depending on severity

50 to 100 mg/kg/day in equally spaced doses depending on severity

100 mg/kg/day in equally spaced doses

\*As with antibiotic therapy generally, treatment should be continued for a minimum of 48 to 72 hours after the patient becomes asymptomatic or until evidence of bacterial eradication has been obtained

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum of 10 days of treatment is recommended to guard against the risk of rheumatic fever or glomerulonephritis.

In the treatment of chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and may be required for several months afterwards.

Persistent infection may require treatment for several weeks

Cyclacillin is not indicated in children under 2 months of age

Patients with Renal Failure

Based on a dosage of 500 mg q.i.d., the following adjustment in dosage interval is recommended

Patients with a creatinine clearance of >50 ml/min need no dosage interval adjustment

Patients with a creatinine clearance of 30-50 ml/min should receive full doses every 12 hours

Patients with a creatinine clearance of between 15-30 ml/min should receive full doses every 18 hours

Patients with a creatinine clearance of between 10-15 ml/min should receive full doses every 24 hours

In patients with a creatinine clearance of ≤10 ml/min or serum creatinine values of ≥10 mg %, serum cyclacillin levels are recommended to determine both subsequent dosage and frequency

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# Electron Beams in Radiation Therapy; Pattern of Use

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## Introduction

The advent of cobalt teleisotope equipment and the development of megavoltage devices such as the linear accelerator represent a major advance in the practice of radiation therapy. These modalities permit greater depth of penetration resulting in a more advantageous ratio of dose to diseased versus healthy tissue, while simultaneously permitting a lower skin dose. While quoting this success story, one normally has in mind an x-ray or gamma ray beam.

Electron beams are highly useful tools available from some megavoltage machines. The advantages of electron beams have been largely unknown to many physicians and to the general public. Yet the use of electron beams has become increasingly widespread in recent years due to the growing popularity of the linear accelerator.

The physical characteristics of electron beams are distinctly different from those of photon beams.

(Fig. 1) Their most distinctly (and useful) characteristics is a rapid fall-off of dose near the end of the electron range, resulting in the ability to deliver a sterilizing dose of radiation to tumors within centimeters of the surface, along with an almost complete sparing of the underlying normal tissues.

Electron beams have been in use for radiation therapy at UAB for many years. Currently, two 18 MEV linear accelerators housed here are capable of high efficient electron beam therapy. The purpose of this presentation is to introduce the usefulness of electron beams for cancer treatment and to review the application of this type of treatment at UAB.

## Material

The records of 105 patients who received electron beam therapy were reviewed between April 1977 and December 1978. At UAB, the 18 MEV linear accelerator can produce 6 through 18 MEV electron beams. The selection of a specific electron beam energy depends upon the depth of



interest, because there is a strict relationship between energy and depth of penetration (Fig. 1).

The technique most often used is a single direct portal. Treatment technique can be divided into primary electron beam therapy and "boost" therapy, i.e., electron beams used in addition to the photon beam therapy.

The three most common anatomical sites which have been treated with 6 to 18 MEV electron beams in the past are skin, head and neck, and the chest area. Boost electron therapy has been most often used for large lymph nodes in the head and neck area. The patterns of use in electron treatment at UAB are presented in table.

**The Use of Electron Beams  
(April 1977-Dec. 1978 at UAB)**

Area	Primary Treatment	Boost Treatment
Skin	32	1
Head & Neck	11	6
Chest	47	0
Others	8	0

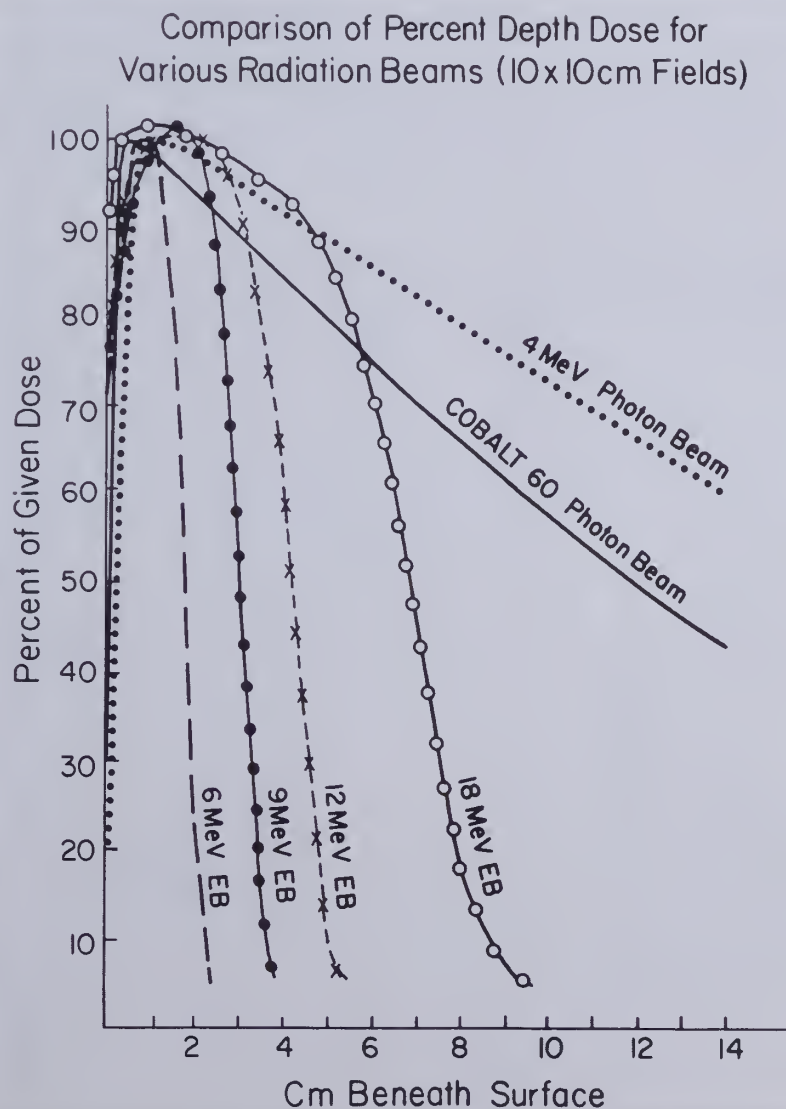


Fig. 1.—Percent depth dose curves for different electron beams (EB) and photon beams. With electron beams, higher skin dose and sharp fall-off in depth dose.

## Clinical Application

- I. Skin—Cancer of the skin, except melanoma, is of course the most accessible cancer. Electron beam irradiation is ideal for skin lesions due to higher skin dose and rapid fall-off in depth dose.
- A. Skin Cancers—Squamous cell or basal cell carcinoma is one of the most common forms of skin cancer. Local excision or local irradiation are equally effective in eliminating these problems. If the possibility of control at a given site is equal by two modalities, the one yielding the best cosmetic or functional result should be selected. Therefore, local radiation therapy has been used more commonly in the areas of eyelids, nose and diffuse infiltrating lesions elsewhere.

Most skin cancer can be treated by 50-100 KEV photons beams, but an electron beam is more effective in certain larger skin cancers. With a given dose of 5000 rads in 4 weeks, excellent cosmetic and functional results were seen (*Fig. 2A&B*). Six MEV electrons are adequate to treat skin lesions measuring up to 1.25 centimeters in depth.
- B. Mycosis fungoides (MF)—MF is an unusual form of malignant lymphoma that begins in multiple areas of the skin and can spread to the lymph nodes and internal organs in later stages. The chronic nature of the disease, its slow progression and its spontaneous improvement and remission expose any definition of "cure" to criticism.

Two treatment modalities have been recognized as extremely efficient in providing control of skin lesions, namely total skin irradiation with 2.5 MEV electrons<sup>1</sup>, and whole body topical application of a solution of nitrogen mustard. In order to achieve greater homogeneity of skin dose, a rotational technique was adapted at UAB. Three thousand rads in five to six weeks has been given. One of the early side effects due to whole body electron treatment is generalized erythema and skin edema which disappears shortly after the cessation of treatment. Transient loss of hair will result, but regrowth occurs within a few months. Local boost electron treatment can be given for residual symptomatic lesions.
- II. Head and Neck—Electron beams can be a real advantage in treatment of head and

neck tumors to reduce radiation complications such as dry mouth due to salivary gland damage, and spinal cord damage.

- A. Oral Cancers—Small cancers of the buccal mucosa and the soft palate can be easily focused by electron beam. Intraoral stents are made for the individual patients and provide protection for teeth and other oral cavity tissue.

Also, lesions on the lip and parotid area are satisfactorily treated to the desired tumor dose through a single homolateral portal. No reaction is seen on the contralateral buccal mucosa and parotid gland.

The submental approach avoids the already heavily irradiated mandible for cancer of the base of the tongue. More advanced lesions can be treated by combination therapy involving an electron boost technique.

- B. Neck Lymph Nodes—The management of cervical lymph node metastasis continues to be a challenging problem to the radiation oncologist.

When the lymph nodes are small and single, excellent results are achieved with radical neck dissection. On the other hand, when a radical neck dissection is performed for multiple or large lymph nodes, the risks of carcinomatosis in the neck is high. Postoperative radiation therapy to long surgical scars in the neck can be a challenge for preventing radiation damage to the spinal cord. Electron beams are excellent tools to use to eliminate this problem. The entire neck can be treated with the 9 MEV electron beam. The enhanced skin sparing effect at the lower energies permits the delivery of 5000 rads in five weeks with acceptable reaction.

When the metastatic lymph nodes are inoperable, electron irradiation can be used alone or as boost therapy in conjunction with photon irradiation.

- III. Chest—Breast carcinoma is the major cancer killer of women in the United States. At the present time, there is considerable controversy in delineating the role of postoperative radiation therapy in the treatment of breast cancer although it is clear that radiation therapy can be of great value in controlling local recurrent disease<sup>2,3</sup>. However, this does not mean that individual patients might not benefit from regional irradiation. Local radiation treatment can be





Fig. 2A—A large basal cell carcinoma near inner canthus of the left eye.



Fig. 2B—Eight months after completion of 9 MEV electron beam treatment.



Fig. 3A—A recurrent chest wall mass after radical mastectomy and skin graft.



Fig. 3B—Three months after completion of 12 MEV electron beam treatment.



given either to the chest wall and/or nodal area either in the immediate postop period or at the time of their first local recurrence.

A. Chest wall—Electron beam therapy has been considered particularly suitable in the treatment of an entire chest wall, because the depth of penetration of electron radiation can be readily controlled with properly selected electron energy which could be applied directly to the chest wall without unnecessary radiation to the radiosensitive lung tissue. Ultrasound scans can be used to measure the thickness of the chest wall<sup>4</sup>. Since after mastectomy the chest wall is usually very thin, averaging about two centimeters in thickness, 9 MEV electron energy was adequate in most of our cases.

In most cases, the entire chest wall on the affected side was irradiated even though the recurrent nodule appeared solitary. Whole chest wall irradiation has been well tolerated up to 4500 rads in five weeks without major problems and local boost dose can be given to the larger recurrent lesions. With appropriate selection of electron beam energy, chest wall recurrence can be easily controlled without damaging underlying lung tissue (*Fig. 3A&B*).

B. Peripheral lymph nodes—Elective treatment of their lymphatic drainage area had been treated routinely in high risk patients before UAB was involved in the Alabama Breast Cancer Project<sup>5</sup>. Although it has not been proven that postoperative irradiation increased the survival rate, there is quite convincing evidence that radiation can decrease the local recurrent rate<sup>6</sup>. Lymph node regions were usually treated through rectangular fields utilizing either electron or photon beams. Long term effects on mediastinal structures can be minimized when electron beams are employed. Nine through 12 MEV electron beams are adequate for these regions.

#### IV. Others

Any lesions at superficial locations in the body can be treated effectively by appropriate electron beams.

Gynecomastia and the tenderness which results from estrogen therapy for symptomatic advanced prostate carcinoma are most unpleasant side effects. In some instances, it has forced discontinuation of the estrogen therapy. Nine MEV electron beams to the tissue of each breast through direct 5 X 5 centimeter portals centered on the nipple have been very effective in reducing

these potential side effects without damaging lung tissues. A typical time dose schedule in such cases would be 1200 to 1500 rads delivered in fractions of 300 rads every other day. An important point which should be emphasized is that the irradiation must be given before estrogen is administered in order to be efficacious.

Treatment of symptomatic bony pain in the ribs or metastatic inguinal lymph nodes is another frequent use for electron beams.

### Discussion

The electron beam is the most easily obtained type of particle radiation beam. However, a fairly high electron energy machine (more than 12 MEV) is needed to provide a useful range of electron beams. That is why the highly popular 4 MEV linear accelerator does not provide for electron beams. Electron beam therapy can be advantageous, limiting the dose to the tumor without underlying normal tissue damage.

Availability of an electron therapy beam provides additional flexibility in the selection of a suitable treatment plan. There should be no hesitation to use electron beam for lesions close to the skin or to use combined treatment with photons to provide the proper dose distribution. Also a differential in depth dose may be achieved by Lucite blocking of a portion of the field. Except for a more intense skin reaction with electron beams, clinical practice has indicated that the time dose relationships for electron treatment need not differ significantly from those in long use with photon therapy.

There are two important points in correct therapeutic planning of the electron beam; first, accurate knowledge of infiltration of the lesion in depth because of rapid fall-off in depth dose, and second, adequate margins around the target area because of significant constriction of isodose curves at depth, especially for small fields at the higher energies.

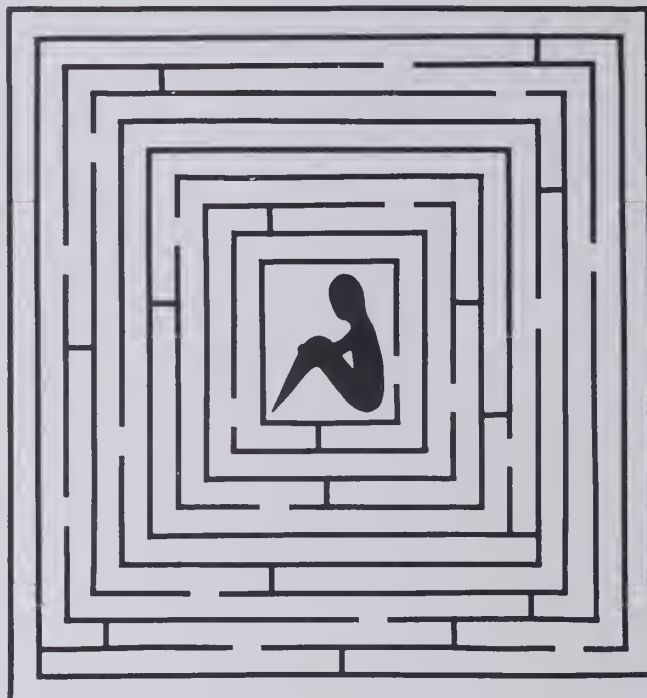
Appropriate application of electron beam treatment will increase cure rate and decrease complication rate in cancer treatment.

### Summary

Electron beams have a unique value in radiation treatment of cancer. The rapid build up and sharp drop-off in depth dose permits higher dose to the superficial lesions without damaging underlying normal tissue.

The current patterns of use with electron beams are reviewed in detail.

*References on page 36.*



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**When painful spasm  
is the presenting  
symptom...**





...in the functional bowel/irritable bowel syndrome\*

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## (dicyclomine hydrochloride USP)

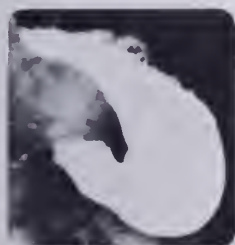
10 mg. capsules, 20 mg. tablets,  
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helps control abnormal motor activity  
with minimal anticholinergic side effects†

### Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

# Merrell

# Bentyl<sup>®</sup>

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations, mydriasis, cycloplegia; increased ocular tension; loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg. capsule and syrup: Adults 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children 1 capsule or teaspoonful syrup three or four times daily. Infants ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: Adults 1 tablet three or four times daily. Bentyl Injection: Adults 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

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**Warnings:** Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies

before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

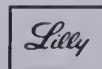
**Precautions:** Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

**Adverse Reactions:** Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin.

(1021751)

\*Equivalent to penicillin V.

Additional information available to the profession on request.



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# Statement From MASA's Committee On Maternal Mortality

It was the feeling of the Maternal Mortality Committee that the information collected by this committee in a completely anonymous form should also be published and made known to the delivering physicians in this state so that wherein it is possible we may all profit professionally and educationally from these unfortunate experiences and hopefully through educational emphasis in certain areas accomplish a reduction in the Maternal Mortality rate and prevent recurrence of preventable maternal deaths.

The Maternal Mortality Committee felt that some of the deaths herein presented were preventable deaths and others were nonpreventable. Some of the preventable deaths were attributed to physician education and others were attributed to patient education.

It was the feeling of the Committee that special educational emphasis should be paid to maternal deaths occurring in association with hypertensive situations of pregnancy (pre-eclampsia and hypertensive disease with superimposed pre-eclampsia) in that this seems to be a frequent recurring cause of maternal death.

The committee felt that this material should be both published in the Journal of the Medical Association of the State of Alabama and also distributed to the delivering physicians via a separate bulletin containing this information sent out on a timely basis.

Also, through certain members of the committee this information is relayed to both the State Medical schools, the Alabama Academy of Family Practice and the Alabama Association of Obstetricians and Gynecologists in hopes that they can direct their educational programs toward the problems which are identified by the Maternal Mortality Committee.

J. Patrick Stewart, M.D., FACOG  
Past Chairman of Maternal Mortality  
Committee  
Medical Association of State of Alabama

# Clinical Summaries of Maternal Deaths

## Clinical Summary

A 41-year-old black married female, gravida 9, para 8, with 8 living children. Her preceding pregnancy was followed by her family practitioner and the only recorded abnormality at that time was a blood pressure recording of 160/90. The patient received no prenatal care during this, her last pregnancy. The apparent first time this patient received medical attention was when she presented in the Emergency Room in a postictal state, in congestive failure and acute pulmonary distress. She was pronounced soon after arrival. Upon admission there was no recordable pulse but the blood pressure was said to be 158/80. The patient was noted to be markedly edematous and expired shortly after admission. Emergency C-section was done and the patient was delivered of a 13 pound 8 ounce stillborn infant. An autopsy was signed for but was never accomplished because the funeral director obtained the body prior to the pathologist.

## Clinical Summary

18-year-old unwed black female who when first seen, underwent a left oophorectomy and omentectomy for a left endodermal sinus tumor. She was pregnant at this particular time and received a therapeutic abortion and was put on triple therapy of Cincristine, Actymicin D and Cytosin and this was continued for one year. During this one year time she appeared to get an excellent response; however, the patient ceased taking her medication and failed to return for any further visits for six months, at which time she was found to be 16 weeks pregnant and was noted to have a massive recurrence of her abdominal tumor. Ultrasound studies confirmed an intrauterine pregnancy and abdominal tumor. The patient was admitted to the hospital and had chemotherapy and paracentesis and was carried up to a point of seven months at which time she was induced and delivered a 4 pound 14 ounce female which survived. The patient had a downhill course and expired nine days later.

## Clinical Summary

23-year-old black female, never married, this being her second pregnancy; the first was terminated by abortion approximately a year earlier on the advice of her physician because the patient had disseminated lupus erythematosus. She again became pregnant and this time refused abortion which was advised by her physician. The physician

agreed to follow the patient and take care of her as best he could. She was maintained on Predisone 5 mg. qid for the entire pregnancy. She had no other previous medical or surgical illnesses but did have severe lupus nephritis, hypertension. She had had multiple relapses and stayed on constant steroid therapy. There was no anemia. The weight gain was about 30 pounds during pregnancy. She was type O positive and was hypertensive throughout the entire pregnancy. She had premature rupture of BOW around 8 months gestation. The length of time between rupture and onset of labor is not known but she did go into spontaneous labor presenting as a vertex and had a normal labor and delivery and post partum course. She went home and during the 3 weeks stay at home failed to take her steroids and returned to the physician in coma and respiratory distress which was apparently from the lupus. She was sent to another hospital where she expired from respiratory distress and on post mortem exam was found to have a bacterial endocarditis of staphylococcal origin and staphylococcal pneumonia possibly related to some bacteremia during the delivery or the post partum period.

## Clinical Summary

16-year-old black female, gravida 1 who had normal blood pressures until about the eighth month of pregnancy when she had around 2 minimally elevated blood pressures and was seen by her physician and begun on Lasix. The patient then later began seizing and was treated with Dilantin and Valium, still as an outpatient. At that point the patient was transferred to the referral hospital and when she arrived at the referral hospital had been seizing for quite some number of hours. She was having irregular contractions and the fetus was noted to be having marked late deceleration with each contraction. Chest x-ray and blood chemistry upon admission were normal. She had a C-section and the baby survived; however, after the section she went into respiratory distress which was felt to be secondary to aspiration of vomitus at a earlier time in the illness probably during the seizure activity.

## Clinical Summary

A 20-year-old black female, para 2-0-1, 7 months pregnant who was admitted to general hospital because of blunt trauma to the abdomen. When she was admitted she was complaining of



pain in the right side and her blood pressure was 180/120. Early in the A.M. of the day following admission she went into shock and on laparotomy was found to have a lacerated right lobe of the liver. This was oversewn and later that day the patient required re-exploration due to a drop in hematocrit. Multiple oozing sites were found in the abdomen. Though fetal heart tones were not heard, the fetus was left in the uterus because of the patient's unstable condition. After the second surgical operation the patient continued to bleed despite having received some 32 units of blood, fresh frozen plasma and platelets and was noted to have a markedly expanding abdomen and obstructive venous return. The patient was transferred to another hospital and at the time of arrival had been anuric for some 12 hours and had a creatinine of 6 with scant grossly bloody urine. She had required assisted ventilations since her second surgical procedure. She was admitted to the nephrology service and medical intensive care. Ob and surgical consultations were obtained and it was the opinion of the Ob service that the uterus should be evacuated but due to the patient's unstable condition, the procedure of choice being surgical evacuation of the uterus was not done and a trial with vaginal-prostaglandin and pitocin stimulation of the uterus was carried out. General surgical consultation suggested that the patient had a severe coagulopathy and that she should receive fresh frozen plasma and platelets. Around 12 hours later it was apparent that the Prostaglandin and pitocin drip were not successful in evacuation of the uterus and plans were made for a hysterectomy. The general surgery service also at the same time desired to do a shunt procedure. The blood bank could not supply sufficient blood for both procedures so the shunt procedure was done in preference to the hysterectomy. Shortly after this the patient had a cardiopulmonary arrest and was successfully resuscitated and then in a short period of time did have a hysterectomy and after this procedure she had a second cardiopulmonary arrest. Attempts at resuscitation were unsuccessful. Shortly after admission originally, the patient was observed with blood pressure as high as 260/150. She apparently had two things going on, one was pre-eclamptic toxemia. The other was the fact that she had blunt trauma to the right upper quadrant in that her boyfriend had beaten her. On post-mortem exam, the patient had a massively infarcted liver with entire right lobe infarcted and the left lobe was involved with fatty changes and was grossly yellow appearing. There was infarction of the pituitary and uterus. Adrenal glands showed areas of patchy infarction. The kidney showed evidence of necrosis.

## Clinical Summary

A 35-year-old black female who had been followed by her internist for a year for systemic lupus erythematosus. The internist was also a nephrologist and was treating her nephrotic syndrome, hypertension and chronic anemia. After a year her oral contraceptives were discontinued because of the nephrotic syndrome and hypertension. The patient failed to visit her internist for some 6 months and at the time she did presented with vaginal bleeding and was found to have a large fungating mass growing from the cervix. She was hospitalized and on Ob-Gyn consultation identified that she was a gravida 6 para 5 with a uterus of approximately 30 weeks gestational size with fetal heart tones present and a fetus was present on x-ray. Cervical biopsy revealed squamous cell carcinoma of the cervix with clinical estimation of stage 1B. The patient was continued on her Steroids and because of her renal and hypertensive situation along with her malignancy, it was decided that the uterus should be emptied and a classical C-section was done with minimal blood loss. Over the ensuing next 4 post-op days the patient became progressively more septic and the abdomen became distended; 4 days later with evidence of sepsis and pyometria, an exploratory laparotomy was performed. She also had a small bowel obstruction at that time. It was also found that the transverse colon had sealed over the previous classical C-section incision and necessitated the resection of a small segment of transverse colon and a supracervical hysterectomy was performed. Over the next 9 days the patient became progressively more septic, was treated with triple antibiotic therapy, covering her for gram negative, gram positive and anaerobic organisms. Cultures grew out *Klebsiella* and *Proteus*, but no anaerobes. At the time of C-section a 4 pound 8 ounce male was delivered with an apgar of 8/9 who never required any oxygen and who did well and was discharged 8-9 days later. The infant's appearance and size were said to be consistent with the gestational age.

The patient expired from sepsis.

## Clinical Summary

19-year-old married black female, g2 p1 with no living children, was admitted to hospital in early labor at 36 weeks gestation. Her previous pregnancy had ended in cesarean section for Abruptio placenta and fetal demise at 28 weeks gestation. This patient had been followed routinely in prenatal clinic.

After labor was determined, a cesarean section was performed with delivery of a 5 lb 7 oz female,

Apgar #9/9 at one and five minutes. Multiple pelvic adhesions were noted at the time of operation.

Patient did well until the 3rd post-op day when she developed an upper respiratory infection and foul purulent discharge from the cervix. Keflin and kanamycin were started.

On the 5th post-op day patient was noted to have dysuria and vaginal bleeding. On 6th post-op day patient had frank hematuria and the hematocrit was 21%, platelet count markedly decreased but PT and Ptt within normal limits. A unit of packed cells was given and geopen was started IV. During the 2nd unit of blood on the 7th post-op day the patient had a cardiopulmonary arrest and resuscitation failed.

**AUTOPSY:** Multiple focal hemorrhages in adrenal, kidneys, liver and spleen. The uterus was normal post-op.

**Autopsy Diagnosis:** Cardiopulmonary arrest with disseminated intravascular coagulation.

### Clinical Summary

A 26-year-old Para-6-4-0-2, who had been followed during her pregnancy until three months, when growth of the uterus stopped. She was followed an additional two months, with no attempt at spontaneous evacuation of the uterus. Patient had no serious medical problems, except a chronic bronchitis, which was thought to be secondary to smoking.

A D & C was performed, and while removing the fetus (estimated four months size), fetal parts became dismembered and the abdomen ruptured, expelling the intestines and viscera. Almost immediately, the patient became hypotensive and cyanotic. She was resuscitated, but needed Aramine and then Isoprel, to maintain peripheral pressure.

She was transferred to a referral hospital where evaluation revealed no evidence of pulmonary embolus by lung scan. She was treated for adult respiratory distress syndrome, with oxygen per endotrachea tube. She continued vaginal bleeding and a D&C was performed one day later. Products of conception and blood clots were removed at this time. Subsequent treatment included steroids, antibiotics for sepsis (temperature greater than 101), blood replacement products (including fresh frozen plasma, platelets, whole blood, and packed cells) for disseminated intravascular coagulopathy and bleeding, and, in addition, hemodialysis for renal failure, and possible acute tubular nephrosis.

Six days after the D&C, she had another episode of hypotension, and hyperthermia, with the pupils

becoming dilated and nonreactive. She, again, was resuscitated with Dopamine and then started on Heparin for disseminated intravascular coagulation. With abdominal distension and rectal bleeding, as well as continued uterine bleeding, it was decided to do an exploratory laparotomy. A large area of dilated necrotic transverse colon was removed, as well as a total abdominal hysterectomy and bilateral salpingo-oophorectomy. Fetal parts, including parts of skull, and a thrombosed right ovarian vein were found during the surgery.

Fluid overload and blood replacement therapy was inevitable, but dialysis did not remedy this situation. Irreversible hypotension developed. With overwhelming sepsis, the patient expired seven days after the D&C.

### Clinical Summary

A 17-year-old white female, gravida two, para one, whose first pregnancy was completely uncomplicated, and terminated in the delivery of a healthy infant. The patient had routine prenatal care, without complications. Her blood pressure and urine proteins were normal during her gestation. She had slight excess of weight gain toward the end of her pregnancy, but this was thought to be physiologic and not to interfere with the pregnancy.

The patient presented to labor and delivery at term, in early labor. An amniotomy was performed during her labor. After about six to eight hours of labor, it was noted that the cervix had remained 8 cm. dilated, and the vertex failed to descend through the pelvis. Also, at this time, it was noted that the fetal heart tones dropped to below 60 per minute. With a diagnosis of failure to progress, and fetal distress, an emergency Cesarean section was performed. An eight and one-half pound female infant, with an APGAR of 8/9 was delivered. Subsequently, the infant did well.

It was noted, with removal of the placenta, that it was adherent to the posterior wall of the uterus, and moderate difficulty in its removal was experienced. The uterus was then closed; and at this point, a sudden drop in the patient's blood pressure was noted. At the same time, it was noted that there was blood in the abdomen, and that the uterus, itself, was swelling rapidly. The uterine incision was reopened, and evaluation revealed a laceration in the posterior uterine wall. Attempts at repair of this laceration and control of hemorrhage were unsuccessful. While awaiting for a consulting obstetrician, blood loss was diminished by means of a pack, and pressure to the uterine wound. An obstetrician performed a hysterectomy. The patient required six units of blood to maintain her blood



pressure through the remaining part of the procedure, and in the immediate post operative period.

However, the patient never recovered from her anesthesia, and required a Bennett respirator over the next six to seven days. Without ever regaining consciousness, the patient had a cardiac arrest on post operative day #7. All during this time, she had been maintained on a respirator. It is not known, exactly, when the patient developed fixed and dilated pupils, but from the course of events, it appears that the patient suffered irreparable brain damage at some point during the surgical procedure.

Her final demise was attributed to pulmonary embolus. An autopsy was not recorded.

### Clinical Summary

A 20-year-old white female, gravida two, para one, whose first pregnancy was totally uncomplicated, and terminated in the delivery of a healthy infant. She had no toxemia or pre-eclampsia during her first pregnancy or delivery. Her second pregnancy was uncomplicated through seven office visits, and on her last office visit showed a blood pressure of 130/80, with negative edema, and negative protein.

Subsequently, three weeks later, the patient described difficulty in voiding and evidently did not have any urine output for two to three days, and then presented to the physicians office with a diastolic blood pressure of greater than 110. She was transferred to the hospital, where she had a grandmal seizure. She was treated with magnesium sulfate, and Apresoline, to stabilize her toxemia.

Four hours after admission to the hospital, she had severe fetal distress, with fetal heart rate below 60. During this interval, she had one transient, lucid episode. However, continued to be obtunded through most of the four hours, and had no urine output through this time period. She was taken to surgery, where it was noted that she had a fixed, dilated pupil before initiation of anesthesia. A Cesarean section was performed with the delivery of a four pound, eight ounce male, with an APGAR score of one. At the time of skin closure, massive bleeding ensued, from all puncture wounds. Upon terminating the surgical procedure, both pupils were fixed and dilated. The patient continued in an obtunded comatose state, necessitating artificial respiration and was pronounced dead three days later.

Autopsy revealed primarily massive CNS bleed. No evidence of an aneurysm was identified. Numerous viscera, including the kidney, revealed blood vessel changes typical of toxemia.

Final diagnosis was massive CNS bleed secondary to eclampsia, renal failure secondary to eclampsia, and 34 weeks pregnant.

### Clinical Summary

A 28-year-old white female, whose pregnancy was complicated at four months by progressive leg weakness. She experienced sudden onset of numbness and weakness of the right leg. Evaluation was compatible with cerebral infarct, secondary to a demyelinating process, or possibly a tumor. Six weeks later, she developed symptoms of left sided weakness.

Neurological impairment became rapid, and progressive. An uncomplicated saline abortion was performed at 22 weeks gestation, in hopes of halting her progressive downhill course.

However, four days later, she was grossly ataxic, with decerebrate posture. Continued central nervous system deterioration led to final demise 26 days later.

Autopsy revealed multiple foci of demyelination, compatible with acute multiple sclerosis.

### Clinical Summary

A 28-year-old black G4 P2 A1 who had been followed in a public health clinic since the fourth month of pregnancy. Course had been relatively normal until the last two weeks when she began complaining of severe headaches in the occiput region. She was treated several times in the ER and for three days admitted for symptomatic treatment of severe headaches and nausea. At no time was the BP noted to be elevated. During this period the patient did have 6½ lb. weight loss. Soon after admission in labor she was noted to have left deviation of the eyes and fecal incontinence. She was given IV MgSO<sub>4</sub> and within 15 minutes she delivered an APGAR 7/8 male, 6 lbs., 6 oz. Post-delivery a Neurosurgery consultant was obtained. LP showed markedly elevated pressure and grossly bloody fluid—soon after the LP the patient had a grandmal seizure which was treated with Valium IV. CAT scan showed extensive intraventricular and subarachnoid bleed within the basal ganglion region. A Scott's cannula was placed in for ventricular drainage. The next day bilateral carotid angiograms showed no filling intracranially. On the same day the pupils became dilated and fixed and she was pronounced dead four days later. No autopsy was obtained.

#### *Postmortem Diagnosis:*

1. *Cerebrovascular accident—left basal ganglion hemorrhage.*
2. *Term intrauterine pregnancy delivered.*

# Impure Reason— A Response

C. W. Scott, M.D.

Deputy Dean  
The University of Alabama School of Medicine  
The University of Alabama in Birmingham

Dr. O. G. Burkart's article, "A Critique of Impure Reason or Do They Really Think Like That in Medical School," in the January/1980 issue of the *MASA Journal* requires a detailed response for several reasons.

First, I find it hard to believe that he actually read my article with any care before he wrote his "critique." It is unlikely that many readers will go to the trouble of reading my article before *reading* his "critique," despite his recommendation to do so.

Dr. Burkart's statements are therefore likely to be accepted as an accurate representation of what I wrote, which they are not. Second, Dr. Burkart goes beyond a criticism of what he thought I wrote to comments about me, what I believe, whom I trust, etc., coming from a man whom I have never met, so far as I know.

Perhaps the most important reason for responding is that Dr. Burkart's article was published not as a "letter to the Editor" but as a feature article of that issue of the *Journal*. I did not have an opportunity to see what he had written and either to respond directly to Dr. Burkart or to submit a response to be published in the same issue of the *Journal*.

The end result is an article published unchallenged which impugns my suitability to be involved in medical education and ascribes to me attitudes and beliefs without evidence.

The general disclaimer that the publisher accepts no responsibility for the opinions expressed by contributors cannot excuse what I consider to be an incredible lapse of editorial responsibility and common courtesy.

To respond more specifically to Dr. Burkart's statements that pertain to my article:

From Dr. Burkart's article:

"... Too, Doctor Scott's perception of medical education in the early part of this century is as unique as his perception of medical education at present. There were not too many physicians in the United States in 1910. There were too many poorly educated physicians. The Flexner Report resulted in the closing down of diploma mills which necessarily decreased the number of medical graduates, but this had nothing to do with a determinant 'belief', or a desire to limit the number of physicians. . . ."

From my article:

"... In the early part of this century, it was believed that there were too many physicians in the United States, and the feedback loop was activated leading to the closing of many medical schools. . . ."

Dr. Burkart is correct insofar as he means that the *principal* concern of the Flexner Report was with the quality of medical education. However, my article addressed *numbers* of physicians, not their quality. As justification for what I said about *numbers* of physicians in the early part of this century, I offer the following sample quotations from the Flexner Report:

"Professor Paulsen, describing in his book on the *German Universities* the increased importance of the medical profession, reports with some astonishment that the number of physicians has increased with great rapidity so that now there is, in Germany, one doctor for every 2000 souls, and in the large cities one for every 1000. What would the amazed philosopher have said had he known that in the entire United States there is already on the average one doctor for every 568 persons, that in our large cities there is frequently one

doctor for every 400 or less, that many small towns with less than 200 inhabitants each have two or three physicians apiece.

"Over-production is stamped on the face of these facts; and if, in its despite, there are localities without a physician, it is clear that even long-continued over-production of cheaply made doctors cannot force distribution beyond a well marked point. . . ."

(Page 14)

"It appears, then, that the country needs fewer and better doctors; and that the way to get them better is to produce fewer. . . ."

(Page 17)

From Dr. Burkart's article:

"Dean Scott, along with the majority of medical educators, seems to accept what Congress 'finds and declares', and servomechanistically goes along with Congress' perceptions. An arrangement such as this would seem to absolve him of his prime responsibility for thinking what is good or bad for American medicine. But he cannot absolve himself in this fashion. Beside the fact that this is accession to a group which is anything but infallible in matters medical or social, witness the yawning pit of fiscal collapse staring us in the face where Social Security is concerned."

"... What makes Dean Scott so confident that what Congress finds and declares *now* is the good and the true, with regard to the education of physicians? . . ."

"Servomechanistic indeed! The Federal Moloch is more like a servosocialistic machine. The Bible says, 'Put not your trust in princes.' The Congress has 535 princes, and Doctor Scott is willing to trust every one of them! Need I say more about my lack of confidence in American



medical education at the present day?"

From my article:

"... There are now dire warnings about an impending surplus of physicians. If these projections are accurate, their effect is being diluted by efforts to turn attention away from numbers to specialty and geographic distribution or to redesign of the 'health care delivery system'. The end result is muddled signals to the medical education system and unclear directions as to what to do about numbers. For example, the preamble to Public Law 94-484 (the Health Manpower Act of 1976) states that, 'Congress finds and declares that there is no longer an insufficient number of physicians and surgeons in the United States.' This could be taken as a message to reduce the number of entering medical students. However, subsequent parts of the Act require medical schools to provide assurances that entering student enrollment will remain at least as high as in the preceding year in order to qualify for federal capitation funds.

"An additional irony is present, emphasizing the muddled nature of the feedback loop. The first substantial batch of new medical students entered in 1970 or 1971 in most cases. Considering the 4 years (3 years in some schools) of medical school plus at least 3 years of residency, the first new batch of new physicians would be ready to enter practice in 1977 or 1978. Congress 'found and declared' in 1976 that the United States had enough physicians and surgeons—a year before the first effects of physician production augmentation would be felt in practice."

These are my only references to Congress as such. I did indicate that the perceptions of "too many" or "too few" physicians had to come through political mechanisms in order to exert necessary pressures and to provide necessary resources to change the output of physicians.

Perhaps this might be taken as a tangential reference to Congress as well. In any case, all my references to Congress, taken separately or together, cannot warrant Dr.

Burkart's statements about my attitudes toward Congress and its wisdom with regard to medical education, with regard to the number of physicians the nation needs, or anything else.

I find particularly annoying Dr. Burkart's last paragraph, in which he quotes a part of one sentence from the Bible (*Psalms 146*) and in his next sentence says that I trust "every one" of the "535 princes" in Congress.

The clear implication being, as I read it, that in addition to my other defects and "Impure Reason," I behave or believe in an un-Biblical or Godless way. This is reinforced by his assertion that I trust the "Federal Moloch" (which I take to mean Congress). "Moloch" refers to a false god whose followers believed that he demanded human sacrifice, which they obediently practiced, particularly by burning their children. Both Moloch and his followers are soundly condemned in the Bible, and the practice of human sacrifice (along with other things) among the people of Israel caused God to "remove them out of his sight" (II Kings 17:17-18). Thus, these words of Dr. Burkart are strong indeed, and I hope that he chose them with the same carelessness with which he read my article!

My references to Congress were intended to show that the words and actions of that body reflect the varying opinions, varying interpretations of available information, and general confusion that presently exists with regard to physician production in relation to present and future need. This is the only conclusion that a reasonably careful reading of my article can yield, I believe.

The last response I will make is to Dr. Burkart's more general remarks. It appears that he does not distinguish considerations of numbers of physicians from considerations of their individual or collective quality. He objects to my use of the terms "servomechanism," "servomechanistic function" and "feedback loop"; perhaps to the "production" of physicians as well.

Finally, he objects to a Dean talking like that and being concerned about such matters, rather than sticking to being a "medical educator".

To take the last point first, the numbers of physicians in relation to need concerns me for two reasons. First, I am convinced that no other single factor poses greater risk of deterioration in the quality of medical education than having large numbers of medical students. Since 1968, this medical school has increased the number of medical students in each class from 80 to 165.

It is often difficult to know their names, much less to know many of them as individuals. The resultant atmosphere of "mass production" is distressing and can be borne with equanimity only if it is clearly for a greater good—that is, that society really needs physicians produced on this scale. If instead of numbers as such, a forced redistribution of physicians by specialty and geographic location is the goal (as some say), then I must recall Flexner's words, "... it is clear that even long-continued over-production of cheaply made doctors cannot force distribution beyond a well marked point."

If we are now over-producing physicians (or will be soon), what is the "well marked point" of distribution that can be forced with the over-production of *expensively* made doctors?

Second, "thinking what is good or bad for American medicine," I have to consider what the consequences of an oversupply of physicians might be. Will the consequence be simply that new physicians will find themselves without work? Consider individuals with the enormous legal power, social prestige and personal trust that physicians now have and are likely to continue to have for quite some time, and imagine them in a setting of intense competition for their daily bread.

One possible outcome might be overtesting, overtreatment and excess surgery the likes of which we have never seen or imagined. The consequences of *that* would likely be a public backlash and the institution of controls from which American medicine as we know it would recover slowly if ever.

*Because of space limitations, Dean Scott's response was cut. —Ed.*

# Auxiliary



Mrs. Eugene H. Bradley  
President, A-MASA

## How Is Your Spouse Today?

We expect the cobbler's children to go without shoes, but who would think that physicians' spouses receive "barefoot" medical care?

Having a family member "in the business" might be an advantage if you were buying furniture but just the opposite seems to be true about obtaining routine medical care. If the results of a survey taken by an Ohio county auxiliary hold true for us, being a physician's spouse may be hazardous to our health.

This surprising perspective about medical care of physicians' spouses dealt with smoking, weight loss, breast self-examination, Pap smears, contraception, menopause, hypertension and diabetes. The auxiliary members answered a questionnaire about how they receive care relative to these concerns.

The answers given showed that many medical wives receive less than ideal care, or are uncomfortable about the care they do receive. Admittedly, this is just one auxiliary involved but the responses seem meaningful enough to cause me to relay the information on to you in case it might be happening to your "Number 1."

Acute medical or surgical conditions are not a problem. No one seems hesitant to ask for help when there are obvious symptoms. It is the routine, periodic care for asymptomatic medical wives which appears to pose a problem.

In completing the statement "I hesitate going to a physician because . . .," more than half of the auxiliarians said they felt guilty taking up the doctor's time because they were not charged for the visit. Some reported the opposite by feeling they should get in and get out quickly, and were reluctant to ask questions.

Medical wives often have this feeling reinforced at home when you may comment across the dinner table about how many patients you have seen that day who did not really need to be seen or how many hypochondriacs there seem to be now-a-days. (Does this sound familiar?)

The second most common reason for hesitating to obtain routine care was embarrassment. Doctors and their spouses often socialize and this relationship can be a handicap in obtaining comfortable care.

Another major cause of emotional discomfort was the need to choose a particular physician. Many felt that choosing one doctor as a personal physician constituted a critique of the others. As one wife said, "How can I go to one of them without offending the others?"

A variety of other reasons were given for failure to get routine care. "I feel great." "My husband thinks I am not supposed to get sick." (This shoe fits my husband's foot real well.) And "I already know I am overweight." How valid these responses

may be is unimportant. What is important is the realization that these responses were expressions of feelings. And when dealing with people, feelings are facts.

A potentially dangerous attitude expressed was, "If something were really wrong with me, my husband would notice it." Not even the most attentive physician-husband is able to tell just by looking across the table at dinner if your blood pressure is up or if your blood count is down. Doctor, do you know how long it has been since your wife had a physical? Pelvic exam? Pap smear?

I know that physicians who care for other physicians' spouses feel it is the nicest compliment you can receive. Sometimes you compliment us on our medical knowledge by talking in terms unfamiliar to us and we don't ask questions because we don't want you to think us ignorant.

As physicians' spouses, we may have some unique problems with routine medical care, but we know that it's well worth the effort! As physicians, please talk these facts over with your spouse and encourage routine medical care. Let that spouse know that you care and are concerned about your "Number 1."

When someone asks you "Doctor, how is your spouse today?" you can give a good qualified correct answer.

A handwritten signature in cursive script, appearing to read "Gaxie".



**Before prescribing, please consult complete product information, a summary of which follows:**

The effectiveness of Valium (diazepam) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindications:** Tablets in children under 6 months of age, known hypersensitivity, acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**ORAL:** Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients, should not be employed in lieu of appropriate treatment. When using oral form adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication, abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

**INJECTABLE:** To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling, and, rarely, vascular impairment when used I.V., inject slowly, taking at least one minute for each 5 mg (1 ml) given, do not use small veins, i.e., dorsum of hand or wrist, use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest, concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea, have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status.

Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals under careful surveillance because of predisposition to habituation/dependence. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence, can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

**Precautions:** If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), i.e., phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function, avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

**INJECTABLE:** Although promptly controlled seizures may return, readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

**Adverse Reactions:** Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

**INJECTABLE:** Venous thrombosis, phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm, pain in throat or chest have been reported.

**Management of Overdosage:** Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure, employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value.

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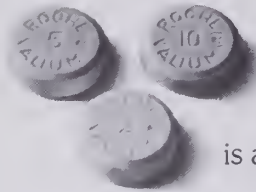


## Overselling Second Opinions

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# A character all its own.



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Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

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The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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## Overselling Second Opinions

HEW's Health Care Financing Administration recently announced that it will try to breathe new life into its National Second Opinion Program, born in 1978.

Reading between the lines of the announced plans to spend another \$250,000 to encourage Americans to seek a second opinion for elective surgery, it appears HEW was hard pressed to conceal its chagrin over the fact that only 6,400 people called the national hotline to obtain names and numbers of physicians willing to give second opinions.

If there is anything a bureaucracy hates its public non-compliance with (or indifference to) a brand-new program. Obviously, HEW concluded, the public had not been adequately indoctrinated. Therefore, the 1980 campaign will have all the trappings of a media blitz for a new detergent. Radio and television announcements, using actor Cliff Robertson, will be supplemented by floods of brochures, posters and other hard sells adjuring Americans to seek a second opinion, whether they want one or not.

The second opinion, when a diagnosis is inconclusive or the cost/benefit factors of the surgery too close to call, has been an entrenched practice in medicine since the earliest days. But HEW rediscovered this wheel and pronounced it a revolutionary approach to curtailing the cost of health care.

Early evidence suggests that second opinions, to the extent that they have been used at all, often add another cost to the total bill, such additions perhaps outweighing the rare case when surgery might not be unequivocally indicated.

As the AMA and others have pointed out, the hoopla over the magic of second opinions presupposes the second opinion to be more valid than the first. There is no reason in logic or experience to support this belief. And if the second opinion contradicts the first, obviously a third is needed to resolve the question. Who can possibly guarantee that this tie-breaker is itself infallible?

HEW plans to spend a cool \$1 million to study the effectiveness of second opinion programs, but not before the new blitz is launched, even though data exists in such states as New York to weigh the effectiveness of such programs.

One avenue for possible study might be the effects of the second opinion propaganda broadsides on people who may decide that the best way to answer the question is not to have the operation, regardless of second or even third opinions. Doubt can easily have that effect, with consequent delays in treatment that could result in far greater costs, both in dollars and lives.

*continued on 4*



## President's Message



Luther L. Hill, M.D.  
President

## Reference Committees

Reference Committees serve an important function. They offer all members an opportunity to have a substantial voice in the operation of their Association.

These Committees first made their appearance in 1973. They were designed to review the Resolutions and Reports arising primarily from the county societies, Councils and the Board of Censors.

Recommendations of the Reference Committees are referred to the Legislative Body—the College of Counsellors and House of Delegates—for action at their Saturday morning Annual Session meeting.

Thus by appearing before a Reference Committee any member is given an opportunity to assist in directing the Association's work.

There are three of these Committees. They all meet on Thursday afternoon at the Annual Session.

Reference Committee A considers continuing medical education and related problems; Reference Committee B considers medical services and socio-economic issues; and Reference Committee C considers legislation and public affairs' problems.

Each committee is composed of five members appointed annually by the President. This year the members have been carefully selected and are believed to be fair-minded, responsible individuals. Their names will appear in the Program.

The subjects to be discussed by the Reference Committees will appear in *The ALABAMA M.D. Watch* for this list, come to the meetings, and make your opinions known. You will help your Association do a better job in representing its members.

*Luther Hill*

Once you undertake to sell a mass audience on something, you had best be prepared for all manner of untoward reactions. Not the least of these, if the propaganda goes too far, is the doubt planted in the minds of some gullible citizens that surgeons are "knife-happy" and thus prone to error of all kinds. This is hardly calculated to engender that kind of patient trust that speeds recovery.

MASA has approved the second opinion program, but with no overpowering faith in its touted miracles. An intensive advertising campaign on the wonders of the second opinion might be just the kind of deception, in total effect, that has previously outraged the FTC and the FCC.

But bureaucracy will not be denied. It plans to go ahead with the spiel—mindless, it appears, of adverse side effects.

*Lon*

S. Lon Conner

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# Trophoblastic Disease in Alabama

Division of Gyn Oncology  
Department of Obstetrics and Gynecology

The University of Alabama in Birmingham

Supported, in part, by the Comprehensive Cancer Center Core  
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## Abstract

Dramatic improvement in the treatment of gestational trophoblastic disease has taken place in the past decade in Alabama. This report from the University of Alabama in Birmingham Regional Trophoblastic Center indicates a sharp reduction

in the percentage of patients with persistent disease, poor prognosis factors and death from disease since 1973 when the Center was established. Through the combined efforts of the physicians of Alabama and the Regional Center, further progress is expected.

Gestational trophoblastic disease (persistent hydatidiform mole or choriocarcinoma) is now curable with modern medical treatment. This, of course was not always the case for it was once a rapidly fatal disease. Li and Hertz, working together at the National Institutes of Health, experienced the first successful treatment of choriocarcinoma with Methotrexate in 1951. In 1961, Hertz confirmed this success by reporting a 50% survival in 63 patients treated with chemotherapy<sup>1</sup>. This was the first demonstration that an established metastatic malignancy could be cured with systemic chemotherapy. Stimulated by these initial successes, information about the gestational trophoblastic diseases expanded at a rapid rate. Actinomycin-D was demonstrated to be effective in Methotrexate resistant choriocarcinoma in 1962<sup>2</sup>. Sequential use of Actinomycin-D and Methotrexate in metastatic choriocarcinoma was reported in

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TABLE I

## Outcome of Patients Registered With Trophoblastic Disease

	1969 thru 1972	1973	1974	1975	1976	1977	1978	Thru May 1979	1973 to Present Total
Number Registered	15	12	34	59	65	48	32	15	265
Number Spontaneous Remission	3	6	16	36	46	36	22	11	173
Number with Persistent Disease	12	6	18	23	19	12	10	4	92
% of Patients with Persistent Disease	80%	50%	53%	40%	30%	25%	31%	27%	35%

1965<sup>3</sup>. Triple chemotherapy with Actinomycin-D, Methotrexate and Chlorambucil was reported in 1970<sup>4</sup>. Classification of patients with metastatic trophoblastic disease into good prognosis group or poor prognosis group was firmly established in 1973<sup>5</sup>. The good prognosis group of patients could be successfully treated with single agent chemotherapy while the poor prognosis group was treated with triple chemotherapy with 70% success rate.

The technology to measure human chorionic gonadotropin (HCG), the tumor marker produced by trophoblastic tissue, advanced rapidly through the 1960's. Bioassays were used from 1927 to 1960 but were time consuming and not accurate at low levels. Immunologic assay methods were introduced in the 1960's. Radioimmunoassay was used experimentally in 1966 and introduced clinically in 1971. Finally, a radioimmunoassay for the beta sub-unit of HCG was reported in 1972 and brought into clinical use in 1973.

### Materials and Methods

A Trophoblastic Disease Referral Center was established by The University of Alabama in Birmingham, Department of Obstetrics and Gynecology, in 1973. A radio immunoassay for beta HCG was established in the Gynecologic Endocrine Laboratory. Free consultation was provided by the Division of Gyn Oncology through

MIST calls and the trophoblastic disease reporting sheet. Physicians were advised of the availability of the beta HCG and its superiority over the pregnancy test to follow hydatidiform moles after evacuation. A system of follow-up on the trophoblastic disease "Hot Line" was devised so that once enrolled in the Center, the patient was followed to either spontaneous remission or treatment. If a patient's titer was not received at the appropriate time, a telephone call was made, or letter was sent, to the responsible physician. Facilities for chemotherapy were made available at UAB. The patients registered with the Trophoblastic Disease Center were managed according to the outline seen in Diagram 1. The backbone of the follow-up is the weekly beta sub-unit HCG titer.

### Results

The results of this effort have been gratifying. The credit for the success of the Center lies with the physicians of Alabama who have responded to the efforts of the Center. During the first full year of operation 12 patients were registered with the Center for follow-up. Six of these patients required chemotherapy. Since then, a total of 265 patients have been registered and followed, and 92 required treatment. The most dramatic impact of the Center is seen by comparing patients with trophoblastic disease treated by the Division of Gyn Oncology prior to 1973 with those treated after



the referral center was established in 1973. A tabulation of the patients registered and the persistent disease rate is presented in Table I. The percentage of patients with persistent trophoblastic disease requiring chemotherapy was sharply reduced. Table II presents the spectrum of patients with persistent disease who required chemotherapy. There has been a dramatic reduction in the percentage of patients with poor prognostic features and, more importantly, a decrease in the number dying of their disease. Of 15 women seen prior to 1973, 3 died. These 3 patients were all referred late with widespread metastasis including the brain. Only one patient of 265 has died after 1973. She was also referred late with metastases already evident in the lungs and vagina; and subsequently died of metastasis to the heart. The reduction in the percentage of patients referred with poor prognostic features reflects earlier diagnosis by careful surveillance with the beta HCG titer. Five of 15 patients referred prior to 1973 were in the poor prognosis group (33%), whereas only 7 of 265 (3%) have had poor prognostic features after 1973. The largest number of patients registered was in 1976. A gradual decline since that time has been experienced. This reflects the fact that several private laboratories have

made the HCG titer available and some physicians are following their own trophoblastic disease patients without the aid of the Regional Center.

## Discussion

The most rapid improvement in the treatment of trophoblastic disease came in the 1960's. The diagnostic and treatment principles established in that era have been widely accepted and followed since 1973. The patients with persistent disease in the good prognosis category now enjoy 100% curability with chemotherapy. Eighty percent of patients in the poor prognosis group can now be cured with triple chemotherapy<sup>6</sup>. The treatment of the patients who fail triple chemotherapy is now the new frontier in trophoblastic disease. Complicated scoring systems are being utilized to identify patients at special risk. Multi drug regimens are being used in some of these patients and have been shown to be more effective than traditional triple chemotherapy. Recently, a technique was developed at UAB utilizing a nuclear scan to detect metastatic disease after injection of radioactive anti-HCG antibody into the patient. This will localize metastatic deposits resistant to chemotherapy which may then allow surgical removal. Thus, the

TABLE II

Summary of Treatment of Patients With Persistent Trophoblastic Disease

	1969 thru 1972	1973	1974	1975	1976	1977	1978	Thru May 1979	Total 1973 to May 1979
Number with Persistent Disease	12	6	18	23	19	12	10	4	92
Number in Good Prognosis Category	7	4	18	22	17	10	10	4	85
Number in Poor Prognosis Category	5	2	0	1	2	2	0	0	7
Number Referred with Metastasis	8	3	4	5	3	3	1	1	22
Number Dead of Disease	3	0	1	0	0	0	0	0	1

Trophoblastic Disease Center still performs a vital function for the state and the region by keeping abreast of the latest treatment modalities and, indeed, being a leader in developing newer and better techniques.

## Conclusion

The reduction in mortality in Alabama has been a team effort in which the working physician plays a large part by diagnosing trophoblastic disease early, evaluating the uterus properly, following the patient with beta HCG titers, and working with the center to recognize and treat persistent disease. The declining number of patients registered with the center is disconcerting. The tremendous success in treating this disease is directly dependent on the information obtained in the 1960's and 1970's by the trophoblastic disease centers working in concert with referring physicians. This partnership is invaluable and should continue as Alabama strives to attain a 100% cure rate in trophoblastic disease.

### Diagram 1

#### HYDATIDIFORM MOLE

1. Evacuation by suction curettage or hysterectomy
2. Baseline chest x-ray and  $\beta$  subunit HCG titer
3. Surveillance by bi-weekly  $\beta$  subunit HCG titer and monthly physical examination
4. Adequate contraception

Choriocarcinoma

Spontaneous Remission

Diagnosed by  $\beta$  HCG titers falling to negative usually in 12 weeks

Persistent Trophoblastic Disease

1. Evaluate
  - a) Physical exam
  - b) Chest x-ray
  - c) Liver and brain scans
  - d) WBC and platelets

2. Classify

Nonmetastatic TD

Metastatic TD

Diagnosed by:

1. Rising titer
  2. Plateaued titer
  3. Titer elevated 12 weeks
- Treat with Single-Drug Therapy

Good Prognosis Group

Diagnosed by:  
Metastasis present but no "poor prognosis" factors present  
Treat with Single-Drug Therapy

Poor Prognosis Group

Diagnosed by:  
1. Antecedent pregnancy terminated > 4 months prior to metastases  
2. Brain and liver metastases  
3. Resistance to single drug therapy  
Treat with Triple-Drug Therapy

Management of hydatidiform mole and choriocarcinoma

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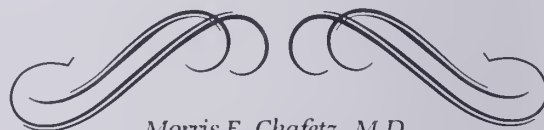
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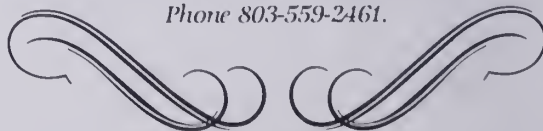


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# RELIEF OF SICKLE CELL ANEMIA PAIN

Chuck Lawrence, B.S.\*  
Herschel P. Bentley, Jr., M.D.†

One of the most difficult problems in caring for patients with sickle cell anemia is the management of painful crises. This is characterized by recurrent attacks of pain in any region of the body which are believed due to intravascular sickling. During these painful crises no change is found in hematocrit, hemoglobin or reticulocyte count, but reproducible alterations involving fibrin formation and platelet count do occur<sup>1</sup>. Previous clinical attempts at terminating or preventing painful crises have centered mainly around interfering with the conditions that facilitate the sickling phenomenon. Hyperbaric oxygen<sup>2</sup> has shown some efficacy in termination of crises but obviously remains impractical for the average clinician. Nitrates<sup>3</sup>, carbon monoxide<sup>4,5</sup> and carbonic anhydrase inhibitors<sup>6,7</sup> have been used in attempts to alter the occurrence of the deoxy form of Hgb SS without success. Stabilization of cell membranes with phenothiazine<sup>8,9,10,11</sup> and steroids<sup>12,13,14,15</sup> has also

proved ineffective. Vasodilators<sup>16</sup>, defibrination<sup>17</sup>, anticoagulation<sup>18</sup>, and low molecular weight dextrans<sup>20,21</sup> have the same lack of success. Recently, attention has been focused on urea infusion to maintain a high urea nitrogen level in the blood which in vitro has demonstrated the ability to reverse the sickling process. The results of the urea cooperative study casts some doubts of the efficacy of this procedure<sup>22,23</sup>. Prophylactic treatment with Hydergine<sup>R</sup> sublingual tablets show preliminary positive results<sup>24</sup>. The purpose of this report is to present our documented experiences into a mode of therapy which has previously been mentioned in anecdotal form<sup>25</sup> and which we have found to be dramatically effective on many occasions. Although only one year's experiences have been reviewed, our experience with this form of therapy has encompassed the past fourteen years.

## Subjects and Methods

Our experience with twelve patients treated over the past 12 months who exhibited 37 different incidences of painful crises were studied retrospectively by chart review. Only those crises documented to have been treated with I.V. sterile water were used as data. The ages ranged from 11 months to 26 years.

The site of first onset of pain was used to form three categories which were:

---

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- 1 Extremities—This was always the hand and foot syndrome but on occasion did include pain in elbows and/or knees.
- 2 Abdomen—This includes all crises where the initial complaint was abdominal pain.
- 3 Other—This represents three incidences of onset in the lower back and three with onset in extremities but without joint pain.

"Prior treatment" consisted of oxygen administration, hydration for more than 30 minutes with 1/4 N. or 1/2 N. saline with or without 5% dextrose and P.O. or I.M. administration of narcotic analgesics. Sterile water was given as a rapid I.V. push except in three instances where in the larger dosages, it was given as an I.V. infusion over a period not greater than 30 minutes.

The responses of treatment were recorded as positive or negative by many different observers. Owing to the variability of duration of sickle cell painful crises, responses were arbitrarily given three grades. Grades I and II were considered positive responses. Grade I had complete pain relief within one hour and Grade II complete relief in less than five hours. A Grade III response was characterized by no pain relief after five hours.

All responses were assessed subjectively by the patient when possible, or when not, objectively by the physician who was caring for the patient. Recurrences were designated as responders who experienced a return of painful crises to the same site within 24 hours of initial treatment.

## Results

Two factors, prior therapy and duration of symptoms, were found to have effect on the subjective response to I.V. distilled water in the patients reviewed. These are shown in Figure 1. Prior treatment, as defined in the methods section, resulted in a progressive decrease in the patients' subjective response to I.V. distilled water as the duration of symptoms increased. If no prior therapy had been given, then the response of the children to the I.V. distilled water was essentially 100% despite the duration of symptoms.

The time elapsed from onset of crises to treatment shows some importance to response. As shown in Figure 1, both the pretreated and untreated groups responded to 100% levels if infusion was begun within twelve hours of onset of crises symptoms. The 12-48 hour duration of symptoms group demonstrated significant differences. A positive response of 92% (11 of 12 incidences) of those without "prior treatment" compared to 33% (2 of 6 incidences) positive response in the pretreated group. In patients with symptoms over 48 hours, there was no response (0 of 4 incidences) if

there was prior treatment, but there was complete relief of pain by treatment with distilled water in all patients (5 of 5 incidences) with no prior therapy.

The site of onset of pain showed no relation to the relief of symptoms by the distilled water. Each of the three categories of pain responded with the same relief with identical variation according to durations of symptoms and presence or absence of prior treatment.

Small amounts of distilled water were found to be as beneficial as large amounts. The same response was obtained using 0.2 ml/kg of body weight as using 1.0 ml/kg of body weight.

Serum osmolality done on 10 patients prior and immediately following I.V. infusion showed no change.

There were 2 recurrences of the initial symptoms in these children. Both showed relief of symptoms to a repeat infusion of sterile water without any further recurrence.

## Discussion

The experiences which have been documented over a period of one year are essentially identical to our experiences over many years. As shown in this report, there is evidently a direct correlation between the subjective amelioration of pain as judged by the older patients or by the attending physician when treated by I.V. distilled water. Prior therapy with hydration, narcotics or prolonged oxygen administration will alter this response related directly to the duration of symptoms and other therapy before receiving I.V. distilled water.

The mechanism of action of distilled water in relieving pain with these small amounts of water is unknown. Hyperosmolar solutions will cause the molecular stacking of S hemoglobin resulting in sickling of red cells. However, no change in serum osmolality could be demonstrated before or after the I.V. distilled water.

Measurement of relief of pain in patients with sickle cell anemia is admittedly difficult. Not only is there great variation in the length of painful crises, but a great deal of psychological overlay is present. Therefore, the claim of relief can only be complete relief of all symptoms without requiring further therapy for pain. The problem of psychological effects of therapy must be considered and undoubtedly plays some role in the failures seen in relief of pain in patients given other forms of therapy prior to distilled water. However, it is difficult to imagine one getting a psychological effect from one type of I.V. therapy and not from another. Also many of these incidences of relief were in infants with hand and foot syndrome whose only perceptible knowledge of therapy was that an

already tender and painful extremity was being stuck.

The risk of hemolysis from I.V. distilled water also disturbs physicians. However, sickle cell erythrocytes are more resistant to osmotic lysis than normal red cells. The small volume of distilled water which is given precludes any risk of water overload and was shown to cause no change in serum osmolality.

This report is obviously anecdotal. However, it is hoped that it might stimulate further work in prevention of painful crises, and it offers the practicing physician a very practical and safe way to give patients with painful sickle cell crisis immediate relief.

## Conclusion

In a retrospective study of 37 incidences of painful crises in which treatment with I.V. distilled, sterile water was employed, relief of symptoms was obtained if no prior attempts with other forms of therapy had been initiated. The earlier that treatment was begun after onset of the pain symptoms, the more likely was the patient to positively respond regardless of "prior treatment."

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**Tenuate™** (diethylpropion hydrochloride NF)

**Tenuate Dospan™** (diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

## Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecomastia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agiulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride) One 25 mg tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release One 75 mg tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine™) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES INC  
Cayey, Puerto Rico 00633

Direct Medical Inquiries to  
MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc  
Cincinnati, Ohio 45215, U.S.A.  
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**References:** 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M. T., O'Dillon, R. H., and Leyland, H. M. A comprehensive review of diethylpropion hydrochloride. In *Central Mechanisms of Anorectic Drugs*, S. Garattini and R. Samanin Ed. New York, Raven Press, 1978, pp. 391-404.

**Merrell**

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**Overweight may not always be simple...  
complications can develop.\***

**Complicated or not...**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

## **In uncomplicated overweight.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

\*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

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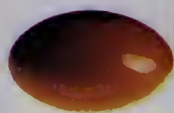


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Motrin tablets  
400 mg

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Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

Time after drug administration (hour)		.5	1	2	3	4
Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		p<0.02	p<0.01	p<0.05	p<0.02	p<0.002

\*0 = No relief    1 = Partial relief    2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

## Motrin 400mg TABLETS

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- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

**Upjohn**

**Motrin<sup>®</sup>** (ibuprofen)

now proved an  
effective analgesic for  
mild to moderate pain

**Motrin<sup>®</sup> Tablets** (ibuprofen, Upjohn)

**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions:** Aspirin: used concomitantly may decrease Motrin blood levels.

**Coumarin:** Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

#### Adverse Reactions

##### *Incidence greater than 1%*

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,\* epigastric pain,\* heartburn,\* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,\* headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

\*Incidence 3% to 9%.

##### *Incidence less than 1 in 100*

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

##### *Causal relationship unknown*

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

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1980

SPRING: A NEW BEGINNING



# THE PELLAGRA STORY IN THE UNITED STATES OF AMERICA\*

Emmett B. Carmichael†

*Dr. Carmichael's article is here reprinted in its entirety, after the first publication in January inadvertently omitted the final portion of it.*

## Abstract

Dr. George H. Searcy, Assistant Superintendent, Bryce Hospital for the Alabama Insane, Tuscaloosa, Alabama, while on assignment at the Mount Vernon Hospital, Mount Vernon, Alabama, for colored insane patients reported an epidemic of pellagra during 1906 and he produced the disease experimentally. In the famous Coca-Cola Trial, Chattanooga, Tennessee, in 1911, the Federal Judge, E. T. Sanford, ruled for the defendant and advised that in the future the federal bureaus should be certain of their claims before bringing them to trial.

Following Searcy's discoveries on pellagra, it seems that the U.S. Public Health Service staff members must have decided that pellagra was to be one of the principal diseases to be followed. It also seems that they must have agreed to avoid using any references to Searcy's discoveries on pellagra. This paper points up these observations and illustrates how our federal bureaus with unlimited funds are able to influence the thinking of our citizens and according to the press have performed many illegal acts during the last 30 to 40 years. Because of the turn of events concerning the reporting on pellagra by many members of the U.S. Public Health Service, this paper is being presented in three parts just as Latin Scholars remember from the first sentence in Julius Caesar, "Gallia est omnis divisa in partes tres," that all Gaul is divided into three parts.

## PART I—Epidemic of Pellagra And Experimental Production

Following the U.S. conflict with Spain in 1810, our troops were stationed at the Cantonment, Mount Vernon, Alabama. The Cantonment was converted into a United States arsenal in 1828, and into a barracks in 1873. In 1895, the fortification with its 15-foot brick wall was turned over to the State of Alabama. In 1900, the Fort was renovated, and in 1901, several hundred of the colored insane patients at the Bryce Hospital for Alabama Insane, Tuscaloosa, were moved to the old Fort. During each of the next few years there appeared a few cases of a disease which seemed to affect the skin of the patients during the summer and early fall months. Usually three or four cases appeared each year and most of them proved fatal. The true nature of the disease was not determined, but it was supposed to be a condition of general debility.

The local staff at Mount Vernon included Dr. E. L. McCafferty, Assistant Superintendent, and Dr. J. H. Somerville.

Dr. George H. Searcy was one of six physicians that accompanied Dr. William Crawford Gorgas when he was assigned to the Panama Canal Project. Dr. Searcy came down with malaria within a few months and returned to Tuscaloosa where he served as Assistant Superintendent of the Bryce Hospital. The Superintendent of the Bryce Hospital requested that Dr. Searcy go to Mount Vernon in 1906 to assist the local staff in studying and controlling the disease that had been affecting several patients each summer. During the summer and early fall months of 1906, there occurred 88 cases

\* This paper was presented at the Fifty-fifth Annual Meeting of the Alabama Academy of Science, Montgomery, Alabama, April 7, 1978.

†Professor Emeritus of Biochemistry, Medical Center, UAB, Birmingham, Alabama, 35294.



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**Contraindications** VERMAX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

**Precautions** PREGNANCY: VERMAX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMAX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

**PEDIATRIC USE** The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

**Adverse Reactions** Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

**Dosage and Administration** The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMAX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

\* Mean cure rate of VERMAX<sup>®</sup> in treating whipworm; cure rate range of 61-75%. Data on file at Janssen Pharmaceutica Inc.

\*\* Mean egg reduction of VERMAX<sup>®</sup> in treating whipworm; egg reduction range of 70-99%. Data on file at Janssen Pharmaceutica Inc.

† Rollo, I.M.: Drugs used in the chemotherapy of helminthiasis, in Goodman, L.S.; and Gilman, A. (eds.): *The Pharmacological Basis of Therapeutics*, ed. 5. New York, Macmillan, 1975, p. 1034.

†† Miller, M.J.; Krupp, I.M.; Little, M.D.; Santos, C.: Mebendazole an effective anthelmintic for trichuriasis and enterobiasis. *JAMA* 230 (10): 1412-1414, Dec. 9, 1974.

1. Registered trademark of Merck Sharp and Dohme.
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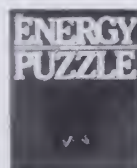
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of acute pellagra at the Mount Vernon Hospital and 57 of them were fatal. None of the nurses had pellagra and the chief difference in their way of living was in their diet. Actually, the nurses served as controls since they did consume a different diet from the diet fed to the patients.

The disease was characterized by cutaneous lesions of an erythematous-squamous and pigmentary character in one or more locations and was associated with disturbances of the digestive tract and nervous system.

The published reports on the etiology of pellagra from the countries bordering on the Mediterranean Sea seemed to stress the continuous eating of damaged corn, poverty, poor hygienic surroundings, and exposure to the sun's rays as predisposing factors. Since corn products had been incriminated, Dr. Searcy sent a sample of the corn meal used at Mount Vernon to the pathologist in charge of the Laboratory of Plant Pathology, Washington, D.C. The pathologist reported that the corn meal was wholly unfit for human consumption. The various fungi and bacteria found on the corn meal had been incriminated in turn as possible causative agents of pellagra. Dr. Searcy learned that much of the Western corn crop of 1905 was badly damaged by wet weather at harvest time and he suggested that the Federal Government should rule under the Pure Food laws that damaged corn not be used for food purposes.

Dr. Searcy not only described the symptoms, diagnosis, treatment, and etiology of pellagra, but he also produced pellagra experimentally. He reported his findings in the *Transactions of the Medical Association of the State of Alabama* in 1907, and the complete paper appeared in the *Journal of the American Medical Association*, July 6, 1907.

The following quotation from page 391 of the *Alabama Transactions* points up the fact that diet was involved in the production of pellagra.

#### General Considerations

Some interesting points about the Mount Vernon epidemic were as follows:

1. Of the eighty-eight cases only eight were males.
2. The average age was thirty-four.
3. Two-thirds of them had been in the hospital longer than one year. Eighty percent had had fair or good health previously.
4. Of the skin lesions: (a) Eighty-five per cent showed it on the back of the hands and wrists. (b) Thirty-five per cent had it on the dorsal surface of the feet and the same per cent on the back of the neck. (c) Twenty per cent had it on the face, i.e., about the cheeks. (d) Only eight per cent, however, had the skin lesions on all of these locations, and 12 per cent had no skin lesions at all; just the salivation, gastro-intestinal disturbance and nervous symptoms.

No nurses had the disease. They handled the patients, slept in the halls near them, and the chief difference in their way of living was in the diet. They ate little corn bread, mostly flour bread, biscuits, etc., and had a little more variety of diet.

As soon as the nature of the disease was determined and the true cause suspected, the patients were taken off corn bread and grits, and wheat bread and potatoes substituted. The rest of their diet was continued as before. No new cases, except the one in the test case, appeared after about ten days. A set of eight patients was kept on the former diet with corn bread and grits as a test. One of these developed the disease, another began to show symptoms, and all became in such poor general health that their diet was changed also.

Since attention has been called to this disease some four or five cases have been recognized in the Hospital for the Insane at Tuscaloosa. I believe that when it becomes generally known that pellagra may occur in this country we will have more cases reported, especially in the South, where corn bread and grits are so largely used."

Several authors referred to Searcy as being the first physician in America to report an epidemic of pellagra in the United States. However, Dr. C. M. Rudolph, formerly senior physician at Bryce Hospital, was quite specific in his paper, "Pellagra—Honor to Whom Honor is Due" which appeared in *The Alabama Medical Journal*, August 1909, stressed Searcy's findings. Also, Dr. Seale Harris in his book, *Clinical Pellagra*, stated that Searcy had not been given credit which he deserved for being the first to produce experimental pellagra in the United States.

Following his report to the Medical Association of the State of Alabama, Dr. Searcy spent several months visiting nearly all of the Southern States and many of their hospitals for the insane where he made a survey of the incidents of pellagra in each institution. His report of that survey, "Pellagra in the Southern States" was published in the *New Orleans Medical and Surgical Journal*, December 1908. He included several of his cases of pellagra with pictures of the patients which illustrated the extent of some of the skin lesions. As to treatment, he stated that the pellagra patient should be taken off all products made from corn and substitute a good liquid diet and provide good hygienic surroundings but not in the bright sunlight.

The first group of references with articles concerning pellagra in America include a fair sample of representative journals: *J.A.M.A.*; *New Orleans Medical Journal*; *Southern Medical Journal*; *American Journal of Medical Sciences*. They all refer to the fact that Dr. Searcy observed the first epidemic of pellagra in the United States. With this wide coverage, it seems unlikely that all of the members of the staff of the U.S. Public Health Service could have failed to notice that Searcy had made a monumental discovery of the first epidemic



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clinical significance



of constipation



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# Constipation acute or chronic

Constipation may be caused by conditions affecting the filling and emptying of the rectum.

## Inadequate filling

- Interference in propulsive contractions
- Impairment of smooth muscle contractility
- Obstruction of the lumen



## Inadequate emptying

Interference in the stimulation of the defecation reflex

## An additional complication

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A unique blend of natural vegetable derivatives  
For comfortable and safe relief of constipation

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- Strengthens stimulus to defecate by increasing indigestible residue
- Helps produce soft, hydrated, well formed stool



## A unique granular formulation

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- Helps establish normal defecatory reflexes and regular bowel rhythm



## Senna

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## Prescribing Information

**ACTIONS:** Perdiem™, with its gentle action, does not produce disagreeable side effects. The vegetable mucilages of Perdiem™ soften the stool and provide pain-free evacuation of the bowel. Perdiem™ is effective as an aid to elimination for the hemorrhoid or fissure patient prior to and following surgery.

**COMPOSITION:** Natural vegetable derivatives: A unique blend of psyllium and senna (Plantago Hydracallaid with Cassia Pad Concentrate).

**INDICATION:** For relief of constipation.

**PATIENT WARNING:** Should not be used in the presence of undiagnosed abdominal pain. Frequent or prolonged use without the direction of a physician is not recommended. Such use may lead to laxative dependence.

**DIRECTIONS FOR USE—ADULTS:** Before breakfast and after the evening meal, one to two rounded teaspoonfuls of Perdiem™ granules should be placed in the mouth and swallowed with a full glass of warm or cold beverage. Perdiem™ granules should not be chewed. After Perdiem™ takes effect (usually after 24 hours, but possibly not before 36-48 hours): reduce the morning and evening doses to one rounded teaspoonful. Subsequent doses should be adjusted after adequate laxation is obtained.

**IN OBSTINATE CASES:** Perdiem™ may be taken more frequently, up to two rounded teaspoonfuls every six hours.

**FOR PATIENTS HABITUATED TO STRONG PURGATIVES:** Two rounded teaspoonfuls of Perdiem™ in the morning and evening may be required along with half the usual dose of the purgative being used. The purgative should be discontinued as soon as possible and the dosage of Perdiem™ granules reduced when and if bowel tone shows lessened laxative dependence.

**FOR COLOSTOMY PATIENTS:** To ensure formed stools, give one to two rounded teaspoonfuls of Perdiem™ in the evening with warm liquid.

**DURING PREGNANCY:** Give one to two rounded teaspoonfuls each evening.

**FOR CLINICAL REGULATION:** For patients confined to bed, for those of inactive habits, and in the presence of cardiovascular disease where straining must be avoided, one rounded teaspoonful of Perdiem™ taken once or twice daily will provide regular bowel habits. Take with a full glass of water or beverage.

**FOR CHILDREN:** From age 7—11 years, give one rounded teaspoonful one to two times daily. From age 12 and older, give adult dosage.

**NOTE:** It is extremely important that Perdiem™ should be taken with a plentiful supply of liquid.

**HOW SUPPLIED:** Granules; 100 gram (3.5 oz.) and 250 gram (8.8 oz.) containers.



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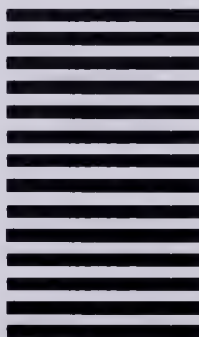
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of pellagra in America. This is even more difficult to understand since all of the physicians had received their medical degrees in medical schools in America.

**PART II—Federal Bureaus Lose At Coca-Cola Trial, 1911**

The story concerning the famous Coca-Cola Trial in 1911 is presented as evidence that our Federal Bureaus approached a new low in influence and moral behavior before the U.S. Public Health Service planned extensive studies on pellagra. Through the influence of Dr. H. W. Wiley, Chief of the Bureau of Chemistry and of the Bureau of Foods and Drugs; and F. P. Morgan, W. O. Emery and L. F. Kebler of the Laboratory of the Department of Agriculture, the Federal Government held the famous Coca-Cola Trial in the Spring of 1911, in Chattanooga, Tennessee. Judge E. T. Sanford of the United States District Court, Eastern District of Tennessee, presided. Mr. James B. Cox, District Attorney, represented the Government.

Dr. L. F. Kebler visited the Coca-Cola Plant in Atlanta in 1907. Inspector J. L. Lynch visited the plant in July 1909. Dr. Kebler and Mr. Lynch were discovered in the basement of the Plant in October 1909 and they had not mentioned their proposed visit to anyone in authority of the company previous to their arrival.

On October 19, 1909, 40 barrels and 20 kegs of Coca-Cola syrup were shipped from Atlanta and were seized by Federal authorities in Chattanooga on October 21, 1909. The Government contended that the syrup violated the Federal Food and Drug Act since it contained an added ingredient, caffeine, which was a deleterious substance. Mr. J. B. Sizer, Attorney for the defendant, explained that the name, Coca-Cola, was trademark and had been registered since 1892, which was more than 10 years before the Food and Drug Act was passed.

The shipment of Coca-Cola syrup was held in Chattanooga and the trial began on March 13, 1911. When the trial opened, the following expert witnesses represented the Federal Government. H. F. Fuller, Analyst, Bureau of Chemistry; F. P. Morgan; W. O. Emery; and L. F. Kebler of the Drug Laboratory, Department of Agriculture; W. F. Boos, Chemist and Pharmacologist, Massachusetts General Hospital, formerly of Harvard University; H. H. Rusby, Dean of the College of Pharmacy and Professor of Materia Medica, Columbia University.

For the defendants, testimony was presented by Hobart A. Hare, Jefferson Medical College; L. Hektoen, E. R. LeCount, M. L. Haines, Albert P.

Mathews, and J. A. Weisner, University of Chicago; John Marshall, Medical Department, University of Pennsylvania; R. L. Emerson, Harvard University; Allan M. Hamilton, Columbia University; John W. Mallet, University of Virginia; and Victor C. Vaughan, University of Michigan.

As the trial progressed, new witnesses were added for both the Federal Government and the Coca-Cola Company. It was learned during the trial that one of the Government Officials gave out the secret that if the Government was successful in the Coca-Cola Trial, it was the first of 2,500 similar cases which the Department of Agriculture was prepared to bring in various parts of the country.

Dr. Victor C. Vaughan, former Dean of the School of Medicine, University of Michigan, and Army Surgeon during the Spanish-American War, testified that caffeine in moderate amounts was beneficial. Dr. John W. Mallet, Professor Emeritus of Chemistry and past president of the American Chemical Society, testified that he had served through the Civil War and that he had observed the beneficial effects of caffeine in the beverages used by the troops in that long and trying conflict.

The defense had a large number of citizens from both Chattanooga and Atlanta on the witness stand who testified that they had not observed any bad effects from drinking Coca-Cola for almost twenty years.

In his closing remarks, Judge Sanford stated, "Let us hope that the outcome of this case will serve as a warning to the Health Department not to bring suits against citizens hereafter until it knows that it is right." Then Judge Sanford returned a verdict in favor of the Coca-Cola Company and the famous trial was over on April 6, 1911.

It seems that Dr. H. W. Wiley was the principal Government Official sponsoring the trial against the Coca-Cola Company but since several of the Federal Departments were highly involved, they all lost in a very long and costly trial. No doubt that all of the Federal Bureaus that were involved in the trial were at a new low in influence.

**PART III—Experimental Production Of Pellagra Confirmed**

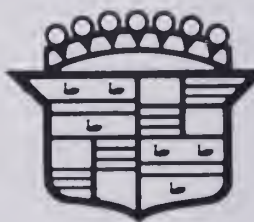
Soon after Searcy's paper on an epidemic of pellagra appeared in the *J.A.M.A.* in 1907, pellagra was observed over a wide area of the United States and especially in the Southern States. At that same time, it seems that the members of the staff of the Public Health Service decided to stress coverage of the disease. In June 1909, Dr. C. H. Lavinder, past Assistant Surgeon, United States Public Health Service and Marine Hospital Service, alone with C. F. Williams and

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J.W. Babcock published a paper in the United States Public Health Reports on "The Prevalence of Pellagra in the United States—A Statistical and Geographical Note with Bibliography." The Bibliography was extensive and included two references to Dr. Searcy: *J.A.M.A.*, 1907, and *New Orleans Medical and Surgical Journal*, 1908. However, in the text he did not refer to Searcy's discovery of the first epidemic of pellagra in the U.S.A. or his experimental production of the disease by means of diet. Dr. Lavinder authored several papers concerning pellagra but never referred to Searcy's studies of the disease. In 1912, Dr. Lavinder presented a paper on "Certain Aspects of the Pellagra Question" at the Annual Meeting of the Medical Association of the State of Alabama, in Birmingham, but did not refer to Searcy's discoveries about pellagra even though he was speaking before Searcy's State Medical Association.

The advice that Judge E. T. Sanford gave near the end of the famous Coca-Cola Trial in 1911, that the Federal Government should be certain about any future trials seems to have been well heeded by the U.S. Public Health Service in its studies on pellagra. The plan seems to have been so well-organized concerning Searcy's studies on pellagra that staff members must have been instructed not to mention Searcy in their reports.

Dr. Joseph Goldberger became the next principal investigator of the U.S. Public Health Service to plan studies concerning pellagra. Just to be fairly certain that he would not fail, he attempted to secure similar conditions that prevailed while Dr. Searcy made his studies at the Mount Vernon Hospital. Goldberger selected the State just west of Alabama, Mississippi, for his planned studies on pellagra. He obtained permission from Governor Earl Brewer to experiment on convict volunteers at the Mississippi Penitentiary, Rankin State Farm, which is located a few miles east of Jackson, Mississippi. The Penitentiary is located near the same latitude and longitude as is Mount Vernon, Alabama. Also weather conditions would probably be quite similar to those at Mount Vernon.

Goldberger fed 11 white male convict volunteers on a diet which contained some corn products at each meal: mush, grits or corn bread. Other foods in the diet were biscuits, rice, gravy, sweet potatoes, collards, cane syrup, coffee, and sugar. The experiment began on February 4, 1915 and was terminated on October 31, 1915. Of the 11 volunteers, 6 developed symptoms including a typical dermatitis of pellagra by the end of six months. A large number of controls subsisting on a different diet showed no symptoms of pellagra. He reported that diet had a controlling influence on the

causation and prevention of pellagra. In other words, Goldberger had confirmed Searcy's experimental production of pellagra while he was experimenting on convicts at the Mississippi Penitentiary. Goldberger continued to conduct various studies on pellagra and his results appeared in numerous reports by the United States Public Health Service. He never referred to either Dr. George H. Searcy's report of the first epidemic of pellagra in the United States, or his experimental production of pellagra by means of diet. It was unusual for a senior investigator to avoid referring to earlier research in the same field of study.

In addition to Lavinder and Goldberger, there were several other members of the United States Public Health Service staff who either co-authored papers about studies on pellagra with Goldberger, or were independent investigators concerning the disease.

The list of members includes the following individuals: J. W. Babcock; M. C. Edmunds; P. E. Garrison; W. King; R. D. Lillie; W. F. Lorenz; W. J. MacNeal; L. M. Rogers; J. Siler; P. M. Stewart; C. W. Stiles; E. Sydenstricker; W. F. Tanner; R. E. Tarbett; C. H. Waring; G. A. Wheeler; D. G. Willets; and C. F. Williams.

All of these authors avoided referring to Dr. Searcy's studies on pellagra. However, Dr. Goldberger did confirm Searcy's studies that diet could either produce symptoms of pellagra or cure the condition if the proper foods were in the diet and it was just as if he had drawn the idea out of a hat and knew intuitively that he had to make the study near Mount Vernon, Alabama, to be certain of positive results.

The whole scheme by the members of the United States Public Health Service staff and the net results seem to be the most fraudulent and ruthlessly planned investigation that has been accepted by either the medical profession or biological scientists.

There were at least 25 references in United States medical journals before 1912 which mentioned the results of Searcy's studies of pellagra. Several reference works and books also gave credit to Searcy for his observations. Ten papers on pellagra were published in *The Journal of the American Medical Association* by January 1911. That was four years before Goldberger began his experiments on the Mississippi convicts which really confirmed Searcy's experimental production of pellagra. Based on the above facts, the Goldberger Medals should have become quite tarnished. If the Goldberger Award is continued, the name should be changed to the Searcy-Goldberger Award.

*References on request.*

# Hospital Lab Responds To Computer Prescription

The medical center laboratory at the University of Alabama in Birmingham (UAB) is a coolly efficient place.

Analytical machines, marvels of bubbling tubes and mechanical fingers, go about their work; technologists hunch over microphones, and white-suited aides sit before silent computer terminals keying in data or touching pen-like instruments to cathode ray screens.

A sense of urgency is noticeable but the work is carried out in an unhurried manner and with methodical attention to the important tasks at hand.

It has to be that way, of course. If the laboratory weren't a model of efficiency, it wouldn't be able to handle a staggering 5.5 million clinical tests a year for patients in university hospitals.

Clinical laboratory tests, according to Mary Nell Spraberry, assistant administrator for UAB hospitals, have increased in the past at the rate of 15-20% a year and are increasingly relied upon as sources of precise medical information.

"The present job, when we stop to think about it, is an awesome one and the future presents an even greater challenge," Mrs. Spraberry says, "but I'm sure we can handle it because we've built a solid foundation upon which we can expand our work without sacrificing quality or without running up overwhelming costs."

Mrs. Spraberry's confidence is bolstered by two innovative computer systems installed and implemented under her guidance. (Mrs. Spraberry, who, in addition to being a microbiologist and an expert at laboratory management, is well schooled in data processing technology.)

The systems are the Laboratory Data Management System (LDAS) and its companion Laboratory Data Acquisition System (LDSA), both of which were developed at UAB and marketed by IBM as Installed User Programs.

The first serves the blood bank, microbiology, chemistry, hematology,

urinalysis, endocrinology, immunology, STAT lab, surgical pathology, cytology, bone marrow, and autopsy. The latter provides programs to interface with LDMS and record test results from automated lab instruments, eliminating the need for manual transcription and key entry.

The systems are executed on an IBM 3031 computer and an IBM Series/1 Computer. Also associated with the systems is a network of IBM 3270 Information Display System (video display) terminals and online printers at locations throughout the lab and in other hospital areas.

The following features of the systems led to fulfillment of those goals:

Test orders are entered on terminals by "menu selection," using hand-held light pens. The terminal operator merely touches the pen to the screen to record data.

Test results are entered on similar terminals, using entry formats identical to printed work sheets. Test status or results can be brought up within seconds and viewed on display terminals.

Information can be edited online to prevent inadvertent storage of obviously erroneous results. Extreme findings—or those outside acceptable limits—can be entered only with a comment, forcing an overt action by the terminal operator.

Workload reports are printed according to requirements of the College of American Pathologists as a byproduct of order and result entry.

Monthly reports by test within cost center provide information that reflects revenue.

Technologist hours are allocated to cost centers and productivity reports are issued.

Mrs. Spraberry highlights such features when she explains the systems to visitors to the Birmingham, Ala., medical complex and speaks at gatherings of

laboratory technologists. Whatever the occasion, her listeners are impressed with what the UAB lab has accomplished. "Perhaps the most admired aspect of LDMS," she relates, "is its capability of providing extensive laboratory working documents, all of which have contributed enormously to our ability to operate effectively."

"Physicians particularly like the cumulative patient summary that is updated every day automatically, produced in printed form late in the evening, and then posted on the patient's chart. This comprehensive document, a perfect example of a product that only a computer can provide on a practical basis, includes all test results since the patient was admitted. Physicians are thus given an easily readable report on their patient's total involvement with the laboratory."

Mrs. Spraberry, dwelling on the subject of accuracy, goes on to say that reporting results erroneously can be disastrous for the patient and, of course, a crushing blow to any laboratory:

"We feel, however, that in our lab, the chance of error has been minimized by eliminating manual transcription of data (information is read directly from terminals) and by making automatic calculations possible. LDMS also embodies certain edit functions that prevent entry of incorrect data," she says.

Physicians are also getting much faster response to requests for tests, Mrs. Spraberry continues. "The elapsed time from receipt of a specimen until results are reported has been significantly reduced because of improved efficiency in handling requests. Data is available through inquiry on terminals and on batch and online printed reports. Comprehensive reporting of results permits quicker analysis by the physician and quicker and sounder decision concerning treatment of patients."

Of importance to budget-minded lab administrators is the fact that the systems have resulted in better use



of manpower, Mrs. Spraberry points out. "LDMS makes it possible to handle greater numbers of tests without a corresponding increase in personnel. Online data entry saves an impressive amount of time and because we have cut down drastically on manual transcription of results from machines, we are freeing technologists from much of the clerical work that used to be involved.

"It also helps to have better organization of work stations. People in the lab are better able to schedule their activities from entry of requests until test completion and production of results. The work organization features of LDMS support all phases of lab operations, controlling data, producing work lists, and specimen collection schedules, and eliminating other kinds of routine tasks.

"Our people are spending less time on the telephone, answering requests for the status of tests or test results. A technologist merely has to go to an online video terminal to get the information within a few seconds rather than search through manual records."

Systems that offer such significant advantages just don't fall into place, obviously; they must be carefully thought out and infused with liberal amounts of experience. LDMS and LDAS were designed by clinical personnel with intimate knowledge of lab procedures and the requirements to bring those procedures under strict control. LDMS is a product which evolved through several versions of hardware and software over a period of eleven years. Mrs. Spraberry became familiar enough with computers to appreciate how they could help solve management problems. "An understanding of both lab procedures and data processing applications is important if a lab is going to get the most out of the computer," she emphasizes.

"A great deal of attention was given to simplifying, speeding up, and making it possible to input information accurately. At the same time, accountability was built into the design. With every interaction with the systems, a record is made of the person responsible—from the clerk

who orders a test to the technologist who performs it, from the person who enters the results to the one who verifies those results.

"The systems are complete. For one thing, they assist in managing information from the time requisitions for service are received until the time results are reported. (LDMS does not require requests for tests to be delivered to the lab. They may be entered wherever a terminal is located—a nursing station, for example.)

Secondly, they support all sections of the lab. A design objective was to support all tests being performed in all parts of the lab and to make it possible to adapt the systems easily to future needs associated with new tests or organizational changes."

LDMS works this way:

Three types of orders may be entered on IBM 3270 Information Display System terminals: Routine, today, and STAT. Routine tests are those to be run the next day. (The order is processed by the computer early in the morning and labels are created.) Today tests are those to be run in the next batch of work. (Labels are produced immediately on an IBM 3287 printer near the order entry terminal.) STAT tests are to be run as soon as possible. (Labels are prepared and the requests are added to the STAT work list.)

While entry may be made wherever terminals associated with the system are located, most are entered in the lab receiving area and in the blood bank. The system maintains a master patient file on direct access storage with information concerning each patient. During order entry, the operator need only key the patient number on the terminal keyboard to identify the patient.

Test requests are entered by menu selection with a light pen in the lab area or on terminal keyboards in other areas. When the light pen is used, the terminal screen offers a list of tests and procedures—a menu—from which the operator selects the ones being requested by touching the pen to appropriate spots on the screen. After

selecting the tests, the operator indicates with the pen whether the specimen is attached to the requisition and the type of request—routine, today, or STAT.

Blood bank orders entered on a terminal include the test number and the number of units required. When blood bank service has been completed, the screen displays all information entered so it can be reviewed and accepted or rejected. (Before the blood can be issued, a crossmatch test must be run for each unit ordered.)

Results are entered on video terminals in much the same manner as test requests. Work lists are displayed and results are recorded by clerks or technologists, who key result data into appropriate fields on the screen. The computer stores the information but the results are not identified as final until they have been verified. Verification is performed by technologist after recorded results are viewed on the terminal. Results are then ready to be reported to the attending physician.

Automatic entry of results produced by machines—SMAC, Coulter S, Hematrak and LARC—is accomplished through the Laboratory Data Acquisition System, which bypasses handwritten transcription and keyed entry. Results are accumulated and stored temporarily in a small IBM Series/1 computer in the laboratory and the information is transmitted periodically to the host computer for processing. Working documents and other printed material are produced in a batch environment or upon request.

Lab results are reported in three ways:

1. Interim test results are printed immediately after they are entered and verified. A printer terminal is located in the emergency room and results are transmitted automatically to it, except for microbiology and crossmatch results.

2. Interim result reports are printed as required and distributed to nursing stations. The reports contain results of all tests from nursing stations since the previous report.

3. The cumulative patient summary report heretofore mentioned is printed.

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## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**FAMILY PRACTICE:** Age 49; Emory, 1955; American Board Certified in Family Practice; seeking practice preferably in an out-patient community health clinic with some hospital emergency room work in the Northeastern part or mountainous region 5,000 to 25,000 population. Available June 1980. LW-030180.

...

**GASTROENTEROLOGY/INTERNIST:** Age 40; Liaquat, 1966; seeking practice in specialty assistant or associate, partnership or solo, preferably in Birmingham or other major cities or their suburbs. Available September 1980. LW-030280.

...

**FAMILY PRACTICE:** Age 51; Cornell University, 1954; American Board Certified; seeking practice in single specialty group, research or institutionally based. Available July 1980. LW-20020.

...

**GENERAL PRACTICE:** Age 27; Wisconsin, 1977; American Board Eligible in 1980; seeking practice in industrial, institutional or private or government clinic preferably in the Birmingham area. Available July 1980. LW-020680.

...

**GENERAL PRACTICE/INTERNIST/EMERGENCY MEDICINE:** Age 31; Washington University; American Board Eligible in 1980; seeking practice in specialty, multi-specialty, general or emergency medicine preferably near Birmingham and/or Montgomery in a town with a population of 250,000 up to 1 million. Available July 1980. LW-020780.

...

**INTERNAL MEDICINE:** Age 32; University of Alabama, 1975; seeking practice preferably in the Mobile area in internal medicine. Available 1980. LW-010280.

...

**INTERNAL MEDICINE:** Age 33; Louisiana State, 1976; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group, or partnership. Available October 1980. LW-20306.

...

**INTERNAL MEDICINE/PULMONARY:** Age 35; Prince of Wales, 1969; American Board Certified, seeking practice in general, specialty, associate or institutional in a town with a population of 10,000 plus. Available July 1980. LW-11029.

...

**INTERNAL MEDICINE:** Age 31; North Carolina, 1976; American Board Certified in Internal Medicine in 1980; seeking practice in general, including out-patient, in-patient and emergency room care preferably in a moderate to large city, southeastern area. Available in spring of 1981. LW-030380.

...

**OBSTETRICS AND GYNECOLOGY:** Age 33; University of Texas, 1973; American Board Eligible; seeking practice in single specialty group, multi-specialty group or partnership. Available August 1980. LW-21032.

...

**OPHTHALMOLOGY:** Age 32; Kansas, 1974; American Board Eligible in 1980; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

**PEDIATRICS/GENERAL PRACTICE:** Age 42; Greiburg, West Germany, 1967; seeking practice in general, specialty, assistant or associate in the central part of Alabama in a town with a population not less than 8,000. LW-020880.

...

**PEDIATRICIAN:** Age 29; University of Alabama, 1975; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, and/or partnership in a medium-sized or larger town, preferably between 20,000 to 80,000 population. Available November 1980. LW-120279.

...

**PEDIATRICS:** Age 29; University of Alabama, 1975; seeking practice in specialty preferably in Birmingham or in a town with a population of 200,000. Available September 1980. LW-010180.

...

**PEDIATRICS:** Age 31; Downstate Medical College, 1972; American Board Certified; seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater than 50,000. Available July 1980. LW-110779. (See LW-11087).

...

**SURGERY, GENERAL:** Age 32; Downstate Medical College, 1972; American Board Eligible; seeking practice in general, assistant or associate, institutional or specialty in a town with a population greater

than 50,000. Available July 1980. LW-110879. (See LW-110779)

...

**SURGERY, GENERAL:** Age 32; Madras, India, 1970; seeking practice in a partnership, single-specialty group, or a multi-specialty group (with any combination of specialists) in a community with a population of 10,000 or more. LW-030480.

...

**SURGERY, GENERAL:** Age 30; University of Alabama, 1974. National Board Certified; will be American Board Eligible in 1980; seeking practice in partnership, single specialty group or institutionally based. Available July 1980. LW-20307.

...

**SURGERY, GENERAL-ABDOMINAL:** Age 34; Alabama, 1971; National Board Certified; American Board Certified in general surgery; seeking practice in solo, partnership or multi-specialty group. Available August 1980. LW-20899.

...

**SURGERY, GENERAL/TRAUMATIC:** Age 34; West Virginia, 1972; American Board Eligible in general surgery; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-20745.

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**UROLOGY:** Age 30; Tulane, 1975; seeking practice in specialty in a town with a population of 20,000 and over. Available July 1980. LW-030580.

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# False Labor And Repeat Cesarean Section

Robert L. Goldenberg, M.D.

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Braxton Hicks contractions, false labor, prodromal labor, latent phase labor, and cervical dystocia are difficult terms to define and even more difficult to separate clinically from early true labor. Nevertheless, confusion among them can lead to inappropriate obstetrical interference and a disastrous outcome for a pregnancy.

## CASE REPORT

The patient was a 27-year-old white female, para 0-2-4-1, whose last menstrual period was April 28, 1976, defining an estimated date of confinement (EDC) of February 3, 1977. Her first pregnancy was complicated by acute hypertension and resulted in the vaginal delivery, apparently at term, of a 2410-gram female infant which had an uncomplicated course. The second pregnancy ended as an early spontaneous abortion.

During the 39th week of her third pregnancy, after several episodes of "false labor", the patient was admitted to another hospital and, according to her records, had 9 hours of contractions which were described as strong and 2 to 3 minutes apart. During this time, the cervix remained closed and uneffaced. The patient was diagnosed as having cervical dystocia and a cesarean section was performed, yielding a 1820-gram female infant with 1- and 5-minute Apgar scores of 8 and 10, respectively. The infant developed respiratory distress diagnosed as hyaline membrane disease (HMD) and died at 8 hours of age. The patient's next 3 pregnancies ended as early spontaneous abortions.

During the current pregnancy, the EDC of February 3 was confirmed by an early bimanual examination, quickening and unamplified fetal heart tones at the appropriate times, and an ultrasound

examination at 24 weeks' gestation. The pregnancy progressed normally with all blood pressures recorded as less than 120/80, a normal weight gain, fundal heights consistent with dates, and 2 normal glucose tolerance tests.

On January 13, at 37 weeks' gestation and in anticipation of an elective repeat cesarean section, the patient underwent amniocentesis. The lecithin to sphingomyelin (L/S) ratio was only 1.5 and therefore surgery was deferred. On January 16, she was seen in the delivery suite and reported having had, for several days, irregular contractions which had gradually become regular and 5 minutes apart. Over the next 72 hours and despite the use of sedation, narcotics, and parenteral isoxuprine after fluid loading, the patient's contractions never became more widely spaced than every 10 minutes, and during most of this time she had documented contractions lasting 45 to 60 seconds every 2 to 5 minutes. The electronically-monitored fetal heart rate remained normal and the cervix remained undilated and uneffaced. An L/S ratio performed on January 18 was 1.7. On January 20, the patient was still having persistent but less regular contractions and was discharged home.

She was next seen on January 24, at which time she was contracting every 4 to 5 minutes and claimed not to have stopped contracting since discharge from the hospital. An amniocentesis was repeated on that date and revealed an L/S ratio of 1.9. She was again discharged after her contractions became less regular.

The patient returned to the labor and delivery floor on January 27 and was contracting every 4 to 5 minutes. The cervix was still closed and uneffaced. An amniocentesis was performed; 14 hours after admission, the L/S ratio was reported to be 2.0. She contracted regularly throughout this period of time and the cervix remained unchanged.



Since the L/S ratio now indicated fetal-lung maturity, a cesarean section was performed and yielded a 2160-gram female infant with 1- and 5-minute Apgar scores of 9 and 10, respectively. At the time of the cesarean section, there was no difficulty dilating the cervix digitally to allow drainage of uterine blood into the vagina. The baby did not develop respiratory distress and otherwise had an uneventful course. Mother and child were discharged together on the fifth postoperative day.

### COMMENT

This patient exhibited an extremely long interval of regularly occurring uterine contractions. Since these contractions did not result in progressive cervical dilatation or effacement, the criteria for the diagnosis of labor were not fulfilled. Since the cervix appeared normal, had no history to suggest scarring, and dilated easily with digital pressure, we can also assume that she did not suffer from so-called cervical dystocia. Rather we believe that she represents one end of the spectrum of Braxton Hicks contractions or "false labor".

Without progressive cervical dilatation, obstetrical intervention without appropriate fetal maturity studies always carries the risk of iatrogenic prematurity.<sup>1,2</sup> We believe her previous neonatal death to be in that category. Had we done a repeat

cesarean section 11 days earlier on January 16 because she was "at term" and contracting regularly, this infant also quite possibly would have developed HMD.


We realize that the presentation of a pregnant woman apparently at term, contracting and uncomfortable, especially with a previous cesarean section, would naturally cause many of us to intervene toward delivery. We present this case to emphasize that not every such patient is in labor or a candidate for immediate delivery. To reduce the incidence of iatrogenic HMD, the diagnosis of labor must be established by progressive cervical dilatation and effacement or, better still an L/S ratio should indicate fetal pulmonary maturity before delivery is attempted.

The recurrent problem of apparent intrauterine growth retardation in this patient is unexplained, as is its possible relationship to the prolonged uterine contractions.

### References

- <sup>1</sup>Goldenberg RL, Nelson KG: Iatrogenic Respiratory Distress Syndrome. *Am J Obstet Gynecol* 123:617-620, 1975.  
<sup>2</sup>Hack M, Fanaroff AA, Klaus MH, et al. Neonatal Respiratory Distress Following Elective Delivery: A Preventable Disease? *Am J Obstet Gynecol* 126:43-47, 1976.

We wish to thank Suzzon Henderson and Jo Ellen Russey for their assistance in the preparation of this manuscript.



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# Auxiliary



Mrs. Eugene H. Bradley  
President, A-MASA

## Doctor, This Is Your Day

Doctors' Day is a project of the Auxiliary to the Southern Medical Association, having been adopted in 1935. The idea of Doctors' Day was suggested by a physician's wife in Georgia.

Mrs. Charles B. Almond carried fond childhood memories of her family physician whose skill and understanding endeared him to his patients as both a beloved doctor and a revered friend. Because of her affinity for the medical profession, she just was destined to become a doctor's wife.

In 1920 she did marry Dr. Charles Almond and moved to Winder, Georgia, where they made their home. Their happy and busy life together serving their fellow men, was the guiding spirit which influenced her idea for a doctors' day. As she walked through the years beside her husband, sharing the dedication of his life to the practice of medicine, the charity and courage, love and sacrifices in his daily ministry of healing humanity's ills, Mrs. Almond became convinced that medicine is the greatest profession on earth and that doctors are the greatest heroes.

This respect and appreciation of the noble achievements of the profession inspired her to present her small local Auxiliary the idea of having a day on which to honor the

practitioners of the Medical Arts. Not only was this adopted by her local Auxiliary but it was adopted by her state and later by Southern Medical Association Auxiliary but it has now become an annual celebration across this country.

The date of March 30 was not chosen at random, but to commemorate one of the greatest discoveries in medical history. It was on this date in 1842 that Dr. Crawford W. Long, the famous Georgia physician, first used ether as an anesthetic agent in a surgical operation, thereby providing mankind with the blessedness of freedom from pain and suffering during surgery. A statue of Dr. Long is located in the hall leading to the Senate Wing of the Capitol in Washington, D.C. Dr. Long said "My profession is to me a ministry from God."

Truly, it can be said that the beneficent effects of this great discovery is a Divine gift from on High. Dr. Long was an honor to the profession. His reticence to fame, his fine character and ethical conduct justified the very high esteem in which he was held by his colleagues. Dr. Long later said, "My only wish is to be known as a benefactor of my people."

The red carnation is the symbol of Doctors' Day and was so adopted in

1949. The analogy of the carnation is closely woven in medical science, so it is only fitting that this flower, so tailored by nature for masculine use with its spicy scent, was chosen as the symbol of Doctors' Day. The meaning of the flower: Divine-Rejoicing-being said to have appeared on earth for the first time when Christ was born. Crown-Coronation-denotes honorary distinction. Its spicy fragrance was used in seasoning dishes "to preserve the body of men, both in mind and spirit." From the juice of its petals a wine was made "that did comfort the heart of man." The color red denotes: Masculinity-Love-Charity-Sacrifice-Bravery-Courage.

This is your one special day on which we honor members of the medical profession, both living and dead, with some act of kindness, gift or a tribute in remembrance of the men and women, who by daily devotion to their duty of service to humanity, minister to our health and welfare.

And so out of the gratitude of a little girl for her kindly family physician, and from the loving heart of a doctor's wife, so justly proud of her husband whose work was his glory, emerged a most beautiful tribute to the medical profession—Doctors' Day.

*Annex*



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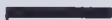
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# A Comparison, U. S. and Alabama Infant Mortality: Secular Trends In Cause-Specific Mortality

Charles L. Shear, Dr. P. H.\*

## Introduction

For decades, Alabama, in comparison to the U.S. has experienced an unusually high rate of infant mortality. Recently, Goldenberg has published a review of the present situation of Alabama's maternal and child health<sup>1</sup>. The present investigation was performed to answer the question; Is the gap in race-specific infant mortality between the U.S. and Alabama consistent across specific causes of death?

## Methods

Published statistics on cause-specific infant mortality for Alabama<sup>2</sup> and the U.S.<sup>3,4</sup> were abstracted. Infant Mortality rates for years 1973-77 were used for whites, and non-whites separately. The specific causes investigated (and their respective ICDA codes) were as follows: influenza and pneumonia (470-74, 480-86), congenital anomalies (740-759), hyaline membrane disease (776.1), asphyxia (776.9), immaturity (777.), symptoms and ill defined conditions (780-796) and accidents (800-949). Together, these specific causes of infant mortality represented 62 percent of all infant deaths in Alabama in 1977.

## Results

Figure 1 displays total infant mortality for the time period under study. For the U.S. and Alabama, it can be seen that total infant mortality for whites and non-whites is on the decline. However, the relative elevation in total infant mortality for each race in Alabama over that of the U.S. has remained fairly constant. In 1977, both white and non-white Alabama residents experienced an approximate 10 percent higher total infant mortality rate than the U.S.

Cause-specific infant mortality can be generally grouped into three categories; (1) those causes in

which Alabama for each race, experiences an infant mortality which is similar to the U.S., (2) those causes for which only Alabama non-whites are elevated above the U.S., and (3) those causes for which both white and non-white Alabama rates are elevated above the U.S.

Figure 2 displays cause-specific infant mortality rates which are similar to that of the U.S. For asphyxia (figure 2a) and immaturity (figure 2b) rates in both Alabama and the U.S. have declined considerably. However, while infant mortality rates for these two conditions in the early period (1973-75) in Alabama were elevated above the U.S. for both races, essentially no difference presently exists. A large gap between white and non-white rates for these two conditions still exists however, with non-whites experiencing an approximate twofold and threefold increase in the risk of infant death due to asphyxia, and immaturity, respectively.

## Discussion

Variations between Alabama and the U.S. in secular and racial trends for cause-specific infant mortality are found. A number of these variations are noteworthy. First, with regard to racial differences in infant mortality in Alabama, in only one condition are white and non-white rates basically equivalent; congenital anomalies. As the white and non-white environments vary considerably (i.e. socio-economic, housing, etc.), this fact illustrates that these environmental differences are

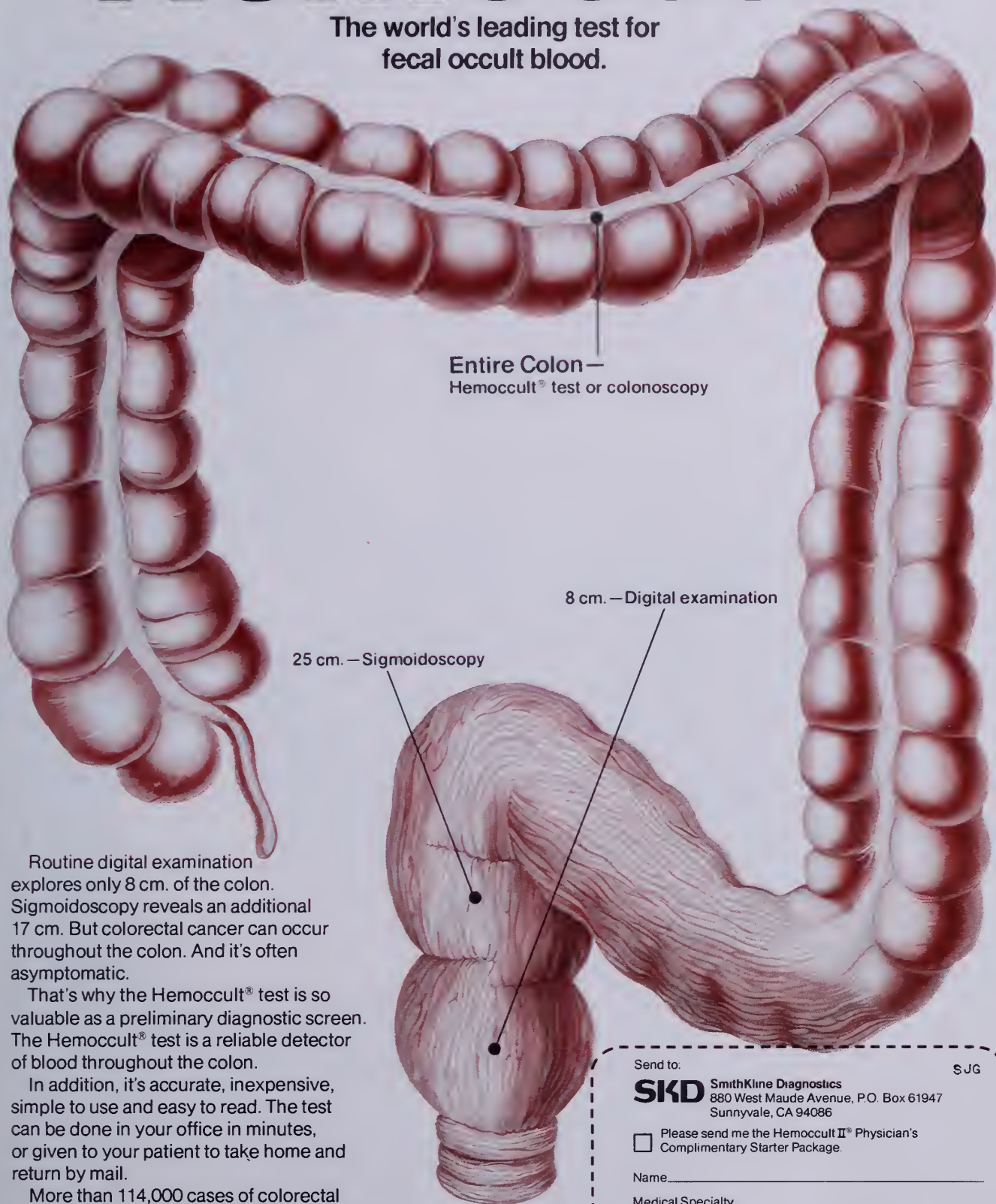
Presented at the American Public Health Association Meeting, November 6, 1979; Delta Omega Society Award.

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College of Medicine  
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...in the functional bowel/irritable bowel syndrome\*

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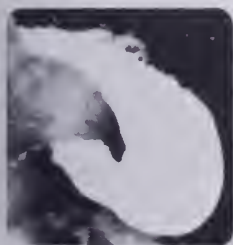
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†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

**Reference:**

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Brief Summary

### INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information. FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache, nervousness, drowsiness, weakness, dizziness, insomnia; nausea, vomiting; impotence; suppression of lactation; constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg. capsule and syrup. **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection. **Adults:** 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

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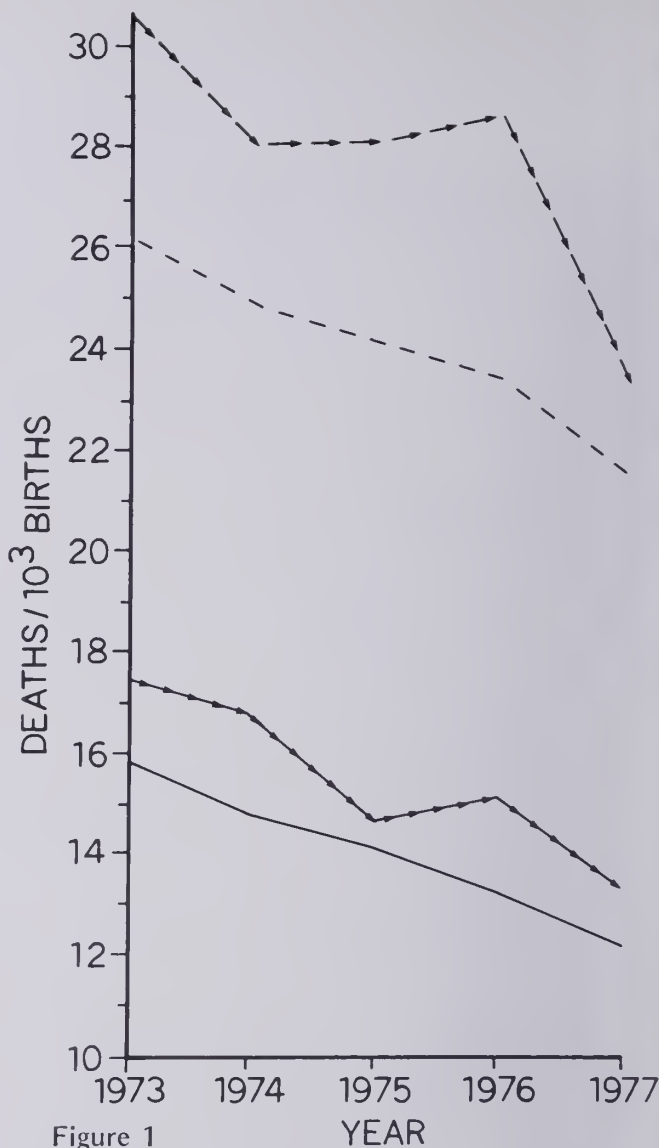


Figure 1—Alabama and U.S. Infant Mortality: All Causes by Race, 1973-77.

Fig. 2—Alabama and U.S. Infant Mortality: Causes Which Are Not Elevated Above the U.S. by Race, 1973-77. 2a—Asphyxia, Unspecified 2b—Immaturity, Unspecified

Fig. 3—Alabama and U.S. Infant Mortality: Causes Which Are Elevated Above The U.S. for Non-Whites only, 1973-77. 3a—Influenza and Pneumonia 3b—Symptoms and Ill Defined Conditions

Fig. 4—Alabama and U.S. Infant Mortality: Causes Which Are Elevated Above The U.S. For Whites and Non-Whites 1973-77. 4a—Congenital Anomalies 4b—Accidents 4c—Hyaline Membrane Disease

## LEGEND

### ALABAMA

—○— white  
-●- non-white

### U. S.

— white  
- - - non-white



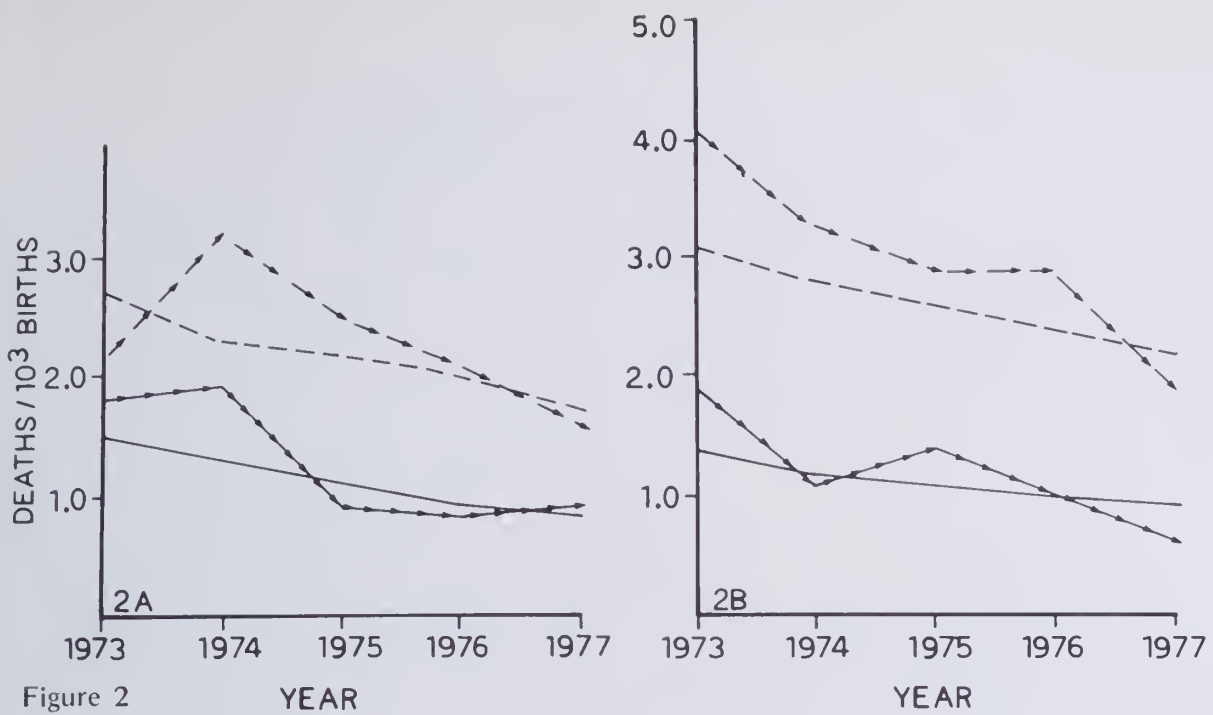


Figure 2

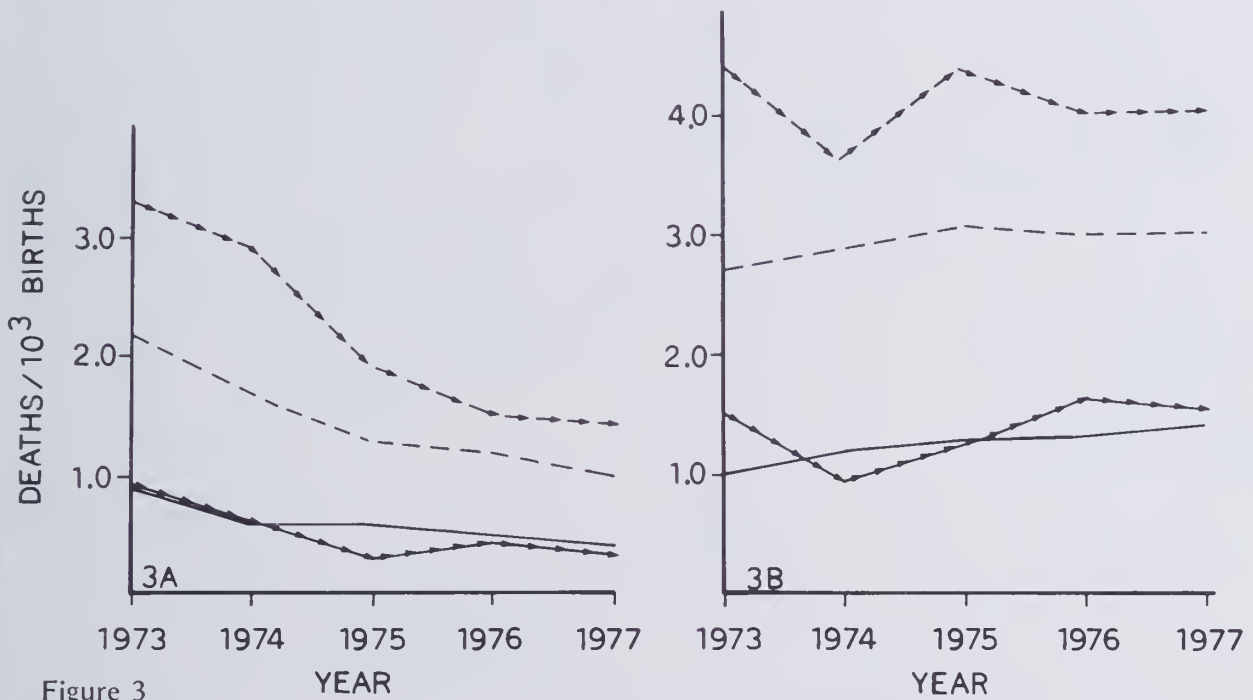


Figure 3

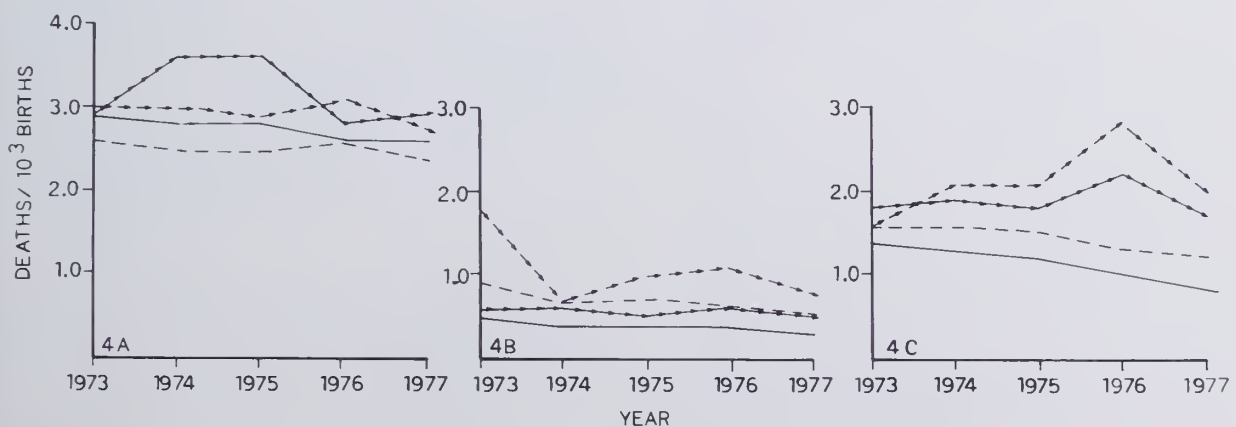


Figure 4

not likely to affect the rate at which congenital anomaly deaths occur. For all other causes, the general statement that poor, black and rural infants have a disproportionate share of infant mortality seems justified<sup>1</sup>.

Figure 3 displays cause-specific infant mortality rates which are elevated above the U.S. for non-white Alabama infants only. These causes include influenza and pneumonia (figure 3a) and symptoms and ill defined conditions (figure 3b). While secular trends indicate a decreasing rate for influenza and pneumonia, a constant rate is found for symptoms and ill defined conditions.

The final category of causes, those for which infant mortality rates in Alabama are elevated above the U.S. for both whites and non-whites, are shown in figure 4. The infant mortality rate due to congenital anomalies (figure 4a) has been essentially unchanged in the U.S. between 1973-77. White and non-white rates are similar in magnitude. For accidents (figure 4b), little change in mortality has occurred since 1974. For hyaline membrane disease (figure 4c), there has been a tendency for a consistent mortality rate in Alabama, while in the U.S. a steady decrease in hyaline membrane disease has been experienced.

## Discussion

Variations between Alabama and the U.S. in secular and racial trends for cause-specific infant mortality are found. A number of these variations are noteworthy. First, with regard to racial differences in infant mortality in Alabama, in only one condition are white and non-white rates basically equivalent; congenital anomalies. As the white and non-white environments vary considerably (i.e. socioeconomic, housing, etc.), this fact illustrates that these environmental differences are not likely to affect the rate at which congenital anomaly deaths occur. For all other causes, the general statement that poor, black and rural infants have a disproportionate share of infant mortality seems justified<sup>1</sup>.

The fact that asphyxia and immaturity infant mortality rates are similar (by race) to the U.S. rates is intriguing. As these two conditions have often been related to socioeconomic status and prenatal conditions of the mother, and since Alabama is more poor and rural than the U.S., one would expect the infant mortality rates for these causes to be elevated in Alabama. Therefore, some factor, other than those suggested above may influence the mortality rates. Since the majority of these deaths occur during the first week of life (a period when access to medical care is likely to be optimal) then the similarity between the U.S. and Alabama for these two causes suggests that the

quality of medical care delivered during this period of life is at least equivalent to that delivered in the U.S. in general.

If we look at the causes of infant death in Alabama which are elevated above the U.S., the majority of these deaths occur after the neonatal period; a time in which both the access to care, and environmental conditions are likely to influence the status of the infant. Among these causes of death are congenital anomalies, influenza and pneumonia, and accidents. One exception to this rule is hyaline membrane disease (in which most deaths occur in the neonatal period), and the reason for this exception is unclear. In addition, the fact that for certain causes of death only the non-white rates in Alabama are elevated above the U.S. suggest that the risk factors for the increase above the U.S. may not be the same in each race. Certainly, the predisposing factors for hyaline membrane disease (which is elevated for both races) differ from that of influenza and pneumonia (which is elevated for whites only).

The importance of this information lies in its potential use in intervention strategies. If we are to lower the infant mortality to the U.S. average, then we must focus our attention on risk factors which must be identified for those causes of death which are above the U.S. average. The fact that these risk factors may be race-specific has important implications for the planning of intervention strategies. In addition, the specific counties in which the cause-specific rates are elevated must also be defined.

## Summary


Cause-specific infant mortality rates for white and non-white Alabama residents were compared with U.S. rates for the years 1973-77. Results indicate that Alabama infant mortality rates are similar to the U.S. for asphyxia and immaturity. All other Alabama infant mortality rates were elevated above the U. S. for either non-whites only (including influenza and pneumonia, symptoms and ill defined conditions) or for both whites and non-whites (including congenital anomalies, accidents and hyaline membrane disease). The variation in rates suggest that access to medical care and general environmental conditions, rather the quality of medical care received, are responsible for the high infant mortality rates in Alabama.

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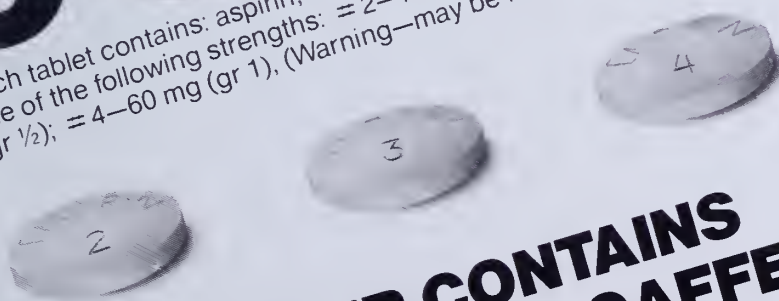
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**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressants. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdosage. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amitriptyline:** In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent alone. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonian agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement, hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia, nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress; vomiting, anorexia, stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

**OVERDOSAGE:** All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

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# SPLENECTOMY

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A functional organ, the spleen, and the diseases in which it plays a role are important to the surgeon anatomically and physiologically. The indications for splenectomy and the subsequent complications that could be encountered, are being re-evaluated in light of more recent observations. This manuscript reviews the present knowledge of splenic function, the indications for splenic surgery, and the possible consequences thereof.

## Embryology And Anatomy

The thymus and the spleen are the earliest lymphoreticular systems appearing phylogenetically.

At birth the spleen is larger in relation to body weight than at any other time in life. There are no germinal centers and very few primitive lymphoid follicles, in the newborn organ, however, at one year, the white pulp is highly developed with lymphoid follicles and is mature as a functional organ.<sup>1</sup>

The spleen's position in the human assures protection anteriorly, laterally and posteriorly by the rib cage. This position is maintained by the splenophrenic, splenorenal and gastrosplenic suspensory ligaments.<sup>2,3</sup> The blood supply is via the splenic artery from the coeliac axis, and also receives the left gastroepiploic system at the cardiac portion of the stomach, the "short gastric vessels."<sup>2</sup> Venous drainage is via the splenic vein and left gastroepiploic veins. Studies of intrasplenic anatomy have demonstrated a transverse orientation of trabecula and a transverse segmental arterial blood supply.<sup>4,5</sup>

The spleen is comprised of a 1-2 mm thick capsule, trabeculi and pulp, the pulp the functional part of the organ and consisting of white, marginal and red pulp. The white pulp contains lymphocytes, plasma cells and macrophages and is analogous to a lymph node. The marginal pulp contains elements of blood plasma and sequestered foreign material. The red pulp consists of interrelated cords and sinuses which form the vascular space.<sup>2,3</sup>

Fourteen to thirty percent of patients have accessory spleens, the higher incidence occurring in

patients with hematologic disorders. The locations of these, in decreasing order of frequency, is the hilus of the spleen, gastrosplenic ligament, splenocolic ligament, splenorenal ligament, greater omentum, female pelvis and scrotum.

## Physiology

As a reticuloendothelial organ, the spleen contributes to the removal of cellular elements from the circulating blood, 350 liters of which pass through the spleen daily. It clears granulocytes, aged or abnormal red blood cells, normal and abnormal platelets, and cellular debris.<sup>2</sup> One third of the total platelet pool is sequestered in the spleen, and this increases with splenomegaly. Overactivity of function (hypersplenism) leads to increased removal of any or all cellular elements, producing decreased red blood cells (RBC), white blood cells (WBC) and/or platelets.<sup>31</sup>

The spleen also plays an important role in antibody production, especially under the age of two, responding primarily to blood-borne infections of encapsulated organisms such as pneumococcus, meningococcus and hemophilus. Splenic macrophages, in addition to a very effective phagocytic action, transport antigen to splenic lymphoid follicles where reaction centers develop and antibodies form. These antibodies attack the antigen on the surface of the organism and destroy it.<sup>1,6</sup>

## Indications For Splenectomy

Indications for splenic surgery include hematologic diseases (primarily hypersplenism), staging for malignant lymphomas (primarily Hodgkin's disease), traumatic splenic rupture and miscellaneous conditions.

**A. Hypersplenism:** Hypersplenism is defined as "overactivity of<sup>2,3,7</sup> splenic function" leading to a decrease of any or all cellular elements in the blood. Formerly termed splenic neutropenia, three essential features characterize the syndrome; splenomegaly, cytopenias (WBC, RBC, Platelets) associated with hyperplastic bone marrow, and correction of cytopenia(s) by splenectomy.<sup>3</sup>

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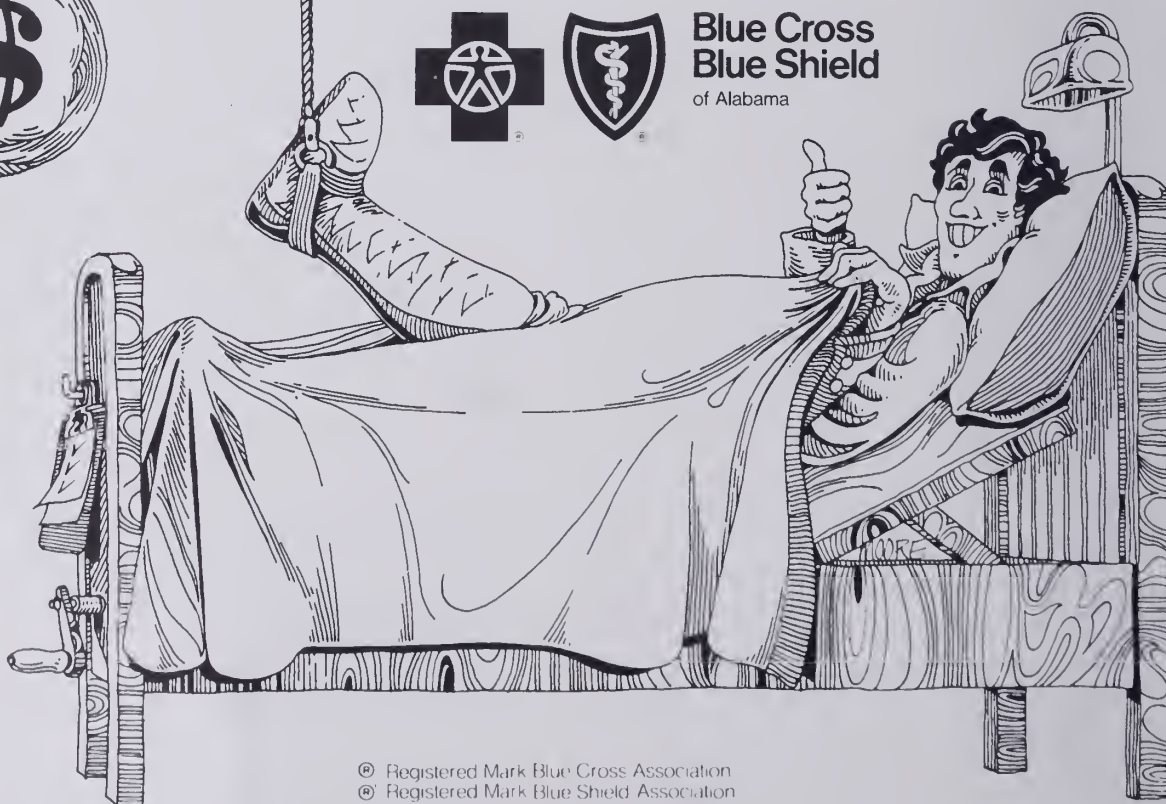
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There are two main theories of pathogenesis of hypersplenism. The first and most accepted view, is that the spleen sequesters blood elements because of perceived abnormalities and eliminates them faster than they can be produced. The second hypothesis is that the spleen produces a humoral substance that inhibits the release of blood cells from the bone marrow.<sup>2,3,7</sup>

The hypersplenic disorders can be divided into primary and secondary conditions.<sup>2,3,7</sup>

1. *Primary Hypersplenism*: The first major group of primary splenic disorders is the *Con-genital Hemolytic Anemias*, composed of hereditary spherocytosis, hereditary elliptocytosis, sickle cell anemia, auto-immune hemolytic anemia, idiopathic thrombocytopenic purpura, primary splenic neutropenia and primary cytopenia.

*Hereditary Spherocytosis*<sup>2,3,7</sup> is caused by an autosomal defect in the red blood cells causing them to be small, dense, and have a very sensitive and abnormal osmotic fragility. Temporarily sequestered in the spleen, they are further altered by the glucose poor environment leading to progressive "conditioning" of the cells. The cellular membrane is further altered by a defect in the sodium pump, increasing sodium permeability and sodium and water enter causing the cell to be spheroid. After a number of passes through the spleen the cells are permanently trapped. Once trapped, the cell attempts to increase its utilization of glucose which is not readily available and eventually undergoes lysis. Exacerbations of hemolysis are related to emotional stress, fatigue and exposure to cold. One hundred percent of patients can be expected to have a good response to splenectomy.

*Hereditary Elliptocytosis*<sup>2,3,7</sup> is also a concomitant autosomal red blood cell defect. The membrane defect results in an abnormal amount of oval and rod shaped red blood cells which are sequestered in the spleen and destroyed. Treatment is splenectomy.

*Sickle Cell Anemia*<sup>2,3,7</sup> an inherited disorder of hemoglobin synthesis, is found primarily in the black population and is characterized by red blood cells that assume a "sickle" shape under conditions of diminished oxygen tension. Normal hemoglobin A is replaced by hemoglobin S. If homozygous (Hemoglobin S/Hemoglobin S) the clinical disease is considered present, and if heterozygous (Hemoglobin S/Hemoglobin A) the usually asymptomatic sickle cell trait is considered present. The disease is non-sex linked recessive, and under conditions of decreased oxygen tension, Hemoglobin S crystallizes in red blood cells, producing elongation and lysis. Increased circulatory stasis and blood viscosity lead to thrombosis,

necrosis and organ fibrosis. In most patients the spleen spontaneously infarcts and undergoes autosplenectomy. Patients may have multiple organ involvement and frequently die in the first decade of life. The spleen is a major site of the sickling and although splenectomy may benefit those with excessive splenic sequestration, it has no effect on sickling. Splenectomy is sometimes beneficial in young children with large spleens and those in which splenic abscess from splenic vessel thrombosis has occurred.

*Autoimmune Hemolytic Anemia*<sup>2,3,7</sup> is characterized by antibodies coating the red blood cells leading to premature cellular destruction. Both "warm" and "cold" antibodies have been identified. Etiologically, the belief is that the reticuloendothelial system traps and destroys the immunologically altered cells.

The disorder occurs most frequently after age fifty and is two times more common in females. Treatment consists of steroids first, in high doses, splenectomy if toxic manifestation of steroids develop, if excessive steroids are ineffective or relapse occurs after steroids are tapered, or if steroids are contraindicated for other reasons. Splenectomy tends to provide better results in patients with warm antibodies in low titers, positive direct and no indirect Coombs reaction, no cold or complement fixing antibodies, and splenic enlargement with selective sequestration demonstrated by Chromium 51 studies. A good response can be expected in 80% of the patients.

*Idiopathic (or Immune) Thrombocytopenic Purpura (ITP)*:<sup>2,3,7</sup> is characterized by decreased circulating platelets even though bone marrow megakaryocytes are increased. The etiology is obscure, but platelet antibodies have been found which may come from the spleen, or the spleen may be the sequestering site for sensitized platelets. ITP is distinguished from secondary thrombocytopenia by the absence of preceding infection, lack of exposure to potential toxins, and absence of splenomegaly (the spleen is palpable 2% of the time). Three times more common in females than males, it usually produces petechiae and/or ecchymosis, but can result in gastrointestinal bleeding, hematuria, bleeding gums, vaginal bleeding or central nervous system bleeding. The platelet count may be less than 50,000. There is prolonged bleeding time, positive tourniquet test, and increased or normal megakaryocytes in the bone marrow. Treatment consists of a six week to two month trial of steroids. If there is no rise in the platelet count or if platelets decrease as the steroids are tapered, then splenectomy is indicated. Seventy-five to 85% of patients have a permanent response to splenectomy. The platelets

usually begin to rise within 24-48 hours and may even rise temporarily to two million, but anticoagulation is seldom necessary. Patients may continue to have platelet antibodies but splenectomy removes the major site of sequestration and destruction as well as a site of antibody formation.

*Primary Splenic Neutropenia and Primary Cytopenia*<sup>3</sup> are rare disorders characterized by neutropenia and pancytopenia with a hyperplastic bone marrow, a differential white blood cell count shifted to the left, and demonstrable auto-antibodies. These patients are greatly benefitted or cured by splenectomy.

Other primary hypersplenic (congenital hemolytic) disorders include Thalassemia, Pyruvate-Kinase deficiency, and Porphyria Hematoporetica. These conditions may require splenectomy for amelioration of some symptoms or to reduce transfusion requirements. Occasionally splenectomy in patients with these diseases produces dramatic relief of symptoms.<sup>7</sup>

2. *Secondary Hypersplenism*:<sup>2,3,7</sup> Characterized by pancytopenia, thrombocytopenia, leukopenia and/or anemia and occurring in conjunction with another disease, these cases represent approximately 50% of Hypersplenism patients. Primary liver disease, extrahepatic portal or splenic vein obstruction, collagen vascular disease, hematologic diseases and infections are some of the causes of secondary hypersplenism. In these disorders, the response to splenectomy depends on the underlying disease process.

#### B. Splenectomy in Malignant Disease

1. *Hodgkin's Disease*<sup>2,7</sup> The diagnosis of Hodgkin's disease is usually established by histological evaluation of a suspicious lymph node. Reed-Sternberg cells are essential for diagnosis of the four major histological types; lymphocytic predominant, nodular sclerosing, mixed cellularity and lymphocytic depleted. The prognosis of the disease depends on the histological type and the extent (stage) of the disease process. The application of celiotomy, splenectomy, liver biopsy and multiple lymph node biopsy as a means of staging the disease is based on the following observations:

1. The disease begins in a single focus and spreads in a predictable manner along adjacent lymph channels;
2. The prognosis is related to the disease stage;
3. The treatment is dictated by the disease stage;
4. Previous methods of evaluation may be inaccurate.

Although there is still controversy over the concept of a staging procedure, particularly whether it is necessary in all types of Hodgkin's disease,

most oncologists today believe the disease extent can best be determined by this method.

2. *Leukemia* is generally not benefitted by splenectomy. However, the so-called "hairy cell" leukemia or leukemic reticuloendotheliosis is a specific indication for splenectomy which often is done urgently to provide for rapid amelioration of the symptoms.<sup>8,9</sup>

C. *Splenic Disruption*<sup>2,3</sup> Injury to the spleen may occur as the result of various traumatic events. Penetrating wounds of both the chest and the abdomen can produce splenic injury. Blunt non-penetrating trauma to the left lower chest and abdomen may cause splenic disruption. The spleen may also be damaged during operative procedures on the stomach, pancreas and colon. Spontaneous splenic rupture, though rare, may occur in association with malaria, typhoid fever, typhus, infectious mononucleosis, and pregnancy.

Splenic rupture following non-penetrating abdominal trauma is quite common and often misdiagnosed. In the classic case the patient will complain of LUQ pain and sometimes left shoulder pain (Kehr's sign). There may be LUQ tenderness, fullness, dullness or any combination of these. X-ray signs include left lower rib fractures, gastric bubble displacement and "scalloping" of the greater curvature suggesting bleeding into the gastrosplenic ligament. The diagnosis may be suspected on liver-spleen scan and confirmed by diagnostic peritoneal lavage and/or arteriography.

Delayed rupture of the spleen has been recognized for some time although more recently it has been suggested that undiagnosed or unrecognized acute splenic rupture is synonymous with delayed rupture of the spleen.<sup>10,11</sup> The syndrome is usually characterized by some form of blunt abdominal trauma followed in seven to ten days by pallor, weakness, abdominal pain, sometimes nausea and vomiting, orthostatic syncope, and anemia. The surgical findings are almost invariably a large intracapsular hematoma which may or may not overlie a parenchymal tear.

Centuries ago, Aristotle,<sup>12</sup> observing apparently normal lives in persons congenitally asplenic, suggested that the spleen was not essential to life. Supported by work with experimental animals, this concept became doctrine and the belief that the spleen could be removed with impunity was rigidly followed until 1952 when King and Schumacher<sup>13</sup> stirred the surgical community with the report of 5 children with fatal post-splenectomy sepsis. Although it is still necessary to do a splenectomy in most cases of spontaneous rupture or when the spleen is total disintegrated traumatically, since King and Schumacher's report there has been an



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**Warnings:** Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies

before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

**Precautions:** Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

**Adverse Reactions:** Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin.

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increasing interest in preservation of the spleen whenever possible, with several recent papers and editorials<sup>6,12,14-25</sup> confirming a small but consistent increased incidence of post-splenectomy sepsis in patients of all ages and successful results following surgical repair of traumatized spleen.

The spleen has a segmental blood supply, is highly vascular and possesses excellent healing capacities. New suture materials and the availability of hemostatic agents such as Avitene<sup>R</sup>, have encouraged surgeons to attempt splenic removal. While the concept and techniques for splenic preservation versus splenectomy are new, these early encouraging results are likely to gain greater support as more surgeons attempt splenic repair. As this occurs, traditional doctrine of splenectomy for all splenic injuries may fall into disrepute.

**D. Miscellaneous Conditions of the Spleen:** Other conditions of the spleen which often require an operation are:

1. **Neoplasms:**<sup>3,26</sup> Neoplasms, classified as either benign or malignant, include hematomas, and lymphomas. The latter usually grow rapidly and are accompanied by cachexia and occasionally by pleural effusion and ascites. Metastasis to liver, regional lymph nodes and pancreas are common. The spleen can also be the site of metastases from other primary lesions.

2. **Cysts:**<sup>3,27</sup> True splenic cysts can be parasitic or nonparasitic in origin. Pseudocysts do occur. Parasitic cysts, usually due to echinococci, account for 2/3 of cases. Nonparasitic cysts are classified as congenital, traumatic, inflammatory and neoplastic, the latter further subdivided into epidermal, dermoid, lymphangitic and hemangitic (most common). Diagnosis is by scan, ultrasound, and/or selective arteriography, and the treatment is usually total splenectomy although cystectomy without splenectomy may be an alternative.

3. **Ectopic Spleens:**<sup>2,3</sup> Ectopic spleens are caused by congenital or acquired deficiencies resulting in lengthening of the ligaments supporting the spleen. They may present as a mobile or fixed mass and can appear even in the pelvis.

4. **Splenic Artery Aneurysms:**<sup>2,3</sup> Aneurysm of the splenic artery is found in one per one thousand autopsies. They occasionally rupture resulting in massive hemorrhage. Usually asymptomatic masses found on abdominal x-ray, they are characterized by eggshell calcification in the upper left quadrant. More common in females and sometimes rupturing during pregnancy, splenectomy and excision of the aneurysm (whether symptomatic or not) is usually recommended, as the mortality rate associated with rupture is 30% or higher.

5. **Splenic Abscesses:**<sup>3</sup> Splenic abscesses are rare, they usually occur in nutritionally depleted individuals and require splenectomy with sump drainage of the left upper quadrant.

## Complications Of Splenectomy

Splenectomy is not an innocuous procedure. Several life threatening complications can and do occur.

1. **Overwhelming Post-Splenectomy Infection**<sup>1,2,3,6,7,15,29,30,31</sup> The spleen plays a major role in phagocytosis and antibody formation, the white pulp concerned mainly with antibody production and the marginal pulp with the removal from the circulation of deformed or altered red cells.

The major problem with splenectomy is the increased incidence of post-splenectomy sepsis, defined by Singer<sup>6</sup> as septicemia, meningitis or pneumonia, usually fulminant but not always fatal, and occurring days to year after removal of the spleen.<sup>6</sup> Overwhelming post-splenectomy infection has been noted in all clinical conditions whenever the spleen is absent, in all ages, and is not restricted to infancy or childhood.<sup>32</sup>

Singer<sup>6</sup> reported a 4.25% septic rate and a 2.5% mortality rate from sepsis in 2,795 patients of all ages. These figures are 50 to 200 times greater than the reported incidence of similar problems in the non-splenectomized population.

Both studies<sup>6,30</sup> suggested that the reason for splenectomy markedly influenced the risk of infection. For benign indications such as trauma, I.T.P., incidental splenectomy and congenital spherocytosis, the incidence of sepsis was low. For conditions such as portal hypertension with congestive splenomegaly or hypersplenism, reticuloendothelial disease and thalassemia the incidence was higher. This has not been definitely substantiated.

The most frequent organisms involved in the sepsis are the encapsulated organisms, the most common being *Pneumococcus pneumoniae*, (48%), followed by *meningococcus*, *E. coli* and *Hemophilus influenzae*. *Staphylococcus* and *Streptococcus* have also been incriminated.

The time interval between splenectomy and sepsis may be as short as thirteen days or as long as 14 years. Onset is usually sudden and can be rapidly progressive and unresponding to therapy. Adrenal hemorrhage (Waterhouse-Friderichsen Syndrome) may occur and can lead to a fatal outcome unless recognized and treated promptly.

2. **Persistent or Recurrent Hemorrhage**<sup>3,28</sup>

This is the most common early postoperative complication. The bleeding can be secondary to an



underlying hematologic disorder, or to a technical error perpetrated but possibly undetected at the operating table, e.g. suture dislodgement from the short gastric vessels (see below under gastric perforation).

3. *Left Lower Lobe Otelectasis with Pleural Effusion*<sup>2,3,7</sup> This accounts for early postoperative fever, and occurs as a consequence of left upper quadrant operation, operative trauma, postoperative pain, hypoventilation and diaphragmatic irritation.

4. *Subphrenic Abscess*<sup>2,3,7,28</sup> Subphrenic abscess, most often in patients being treated with immunosuppressive agents at the time of surgery, can and do occur. They are probably best detected by ultrasound and should be managed promptly with appropriate drainage.

5. *Thrombocytosis*<sup>3,7</sup> Post-splenectomy platelet counts may reach 850,000 to over one million per cc. This is usual and anticoagulation is not necessary for the majority of cases. Spontaneous regression to normal levels gradually occurs over months or years.

6. *Splenic Vein Thrombosis*<sup>3</sup> Thrombosis of the splenic vein usually occurs during the second postoperative week when the platelet count has peaked. Although rare, this may lead to fatal portal vein or mesenteric vein thrombosis. It is however, not believed related to the platelet count.

7. *Gastric Perforation*<sup>3,7,10</sup> The proper method of ligating the short gastric vessels is crucial to the prevention of both gastric perforation and recurrent hemorrhage postoperatively. Simple tie ligation of these vessels on the gastric side is *not* correct technique. Postoperative dilation of the stomach may occur due to a malfunctioning nasogastric tube. If the tie is on the vessels only, it may slip off leading to hemorrhage. On the other hand, if the tie included some of the gastric wall and is forced off by gastric dilatation, the area of stomach included in the ligature may have undergone necrosis and leakage of gastric juice will occur. This can then lead to subphrenic abscess. The complication is preventable by using suture ligation technique on the gastric side of these vessels.

8. *Recurrence of the Disease*<sup>3,28</sup> Recurrence of the hematologic disease or failure to ameliorate the disease can occur. This may be due to the failure to remove undetected accessory spleens, or it may be that the disease simply is unresponsive to splenectomy.

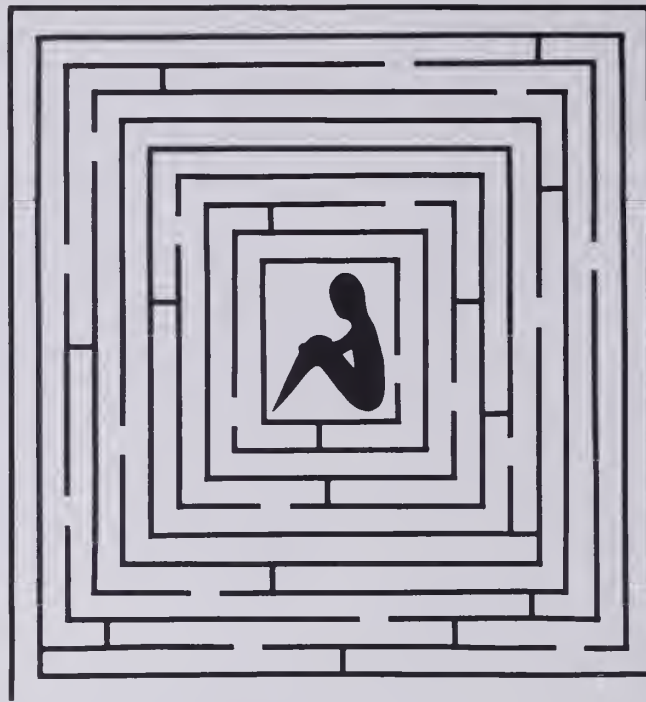
9. *Pancreatic Injuries*<sup>2,3,7</sup> Operative injuries to the pancreas may result in pseudocysts, fistulas or intense inflammatory reactions. All of these may be life threatening if not promptly and appropriately diagnosed and managed.

## Conclusions

The evidence appears overwhelming in support of a more conservative approach to splenectomy. Splenectomy for selected hematologic disease will continue to be proper since the risk of retaining the spleen will outweigh the risk of postoperative sepsis. However, it has been reported that 10 to 40 percent of all splenectomies are done secondary to operative trauma. In the University of Michigan series, of 584 patients undergoing splenectomy, 450 (77%) were done for other than primary hematologic disease.<sup>33</sup> If these figures were extrapolated nationwide, considerable potential unnecessary morbidity and mortality could be avoided as the majority of these probably are salvageable by splenic repair. As more information is learned about hematologic disease, splenectomy as the treatment of choice may be eliminated in those entities also.

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## Bactrim<sup>TM</sup> DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

### Just one tablet b.i.d. for 10 to 14 days



- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications and Usage:** For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. **Note:** The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

**Also for the treatment of documented *Pneumocystis carinii* pneumonia.** To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (Federal Register, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

**Warnings:** Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L E phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

**Urinary Tract Infections:** Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonia:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

**Supplied:** Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose<sup>®</sup> packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose<sup>®</sup> packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Please see reverse side for summary of product information.



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**C. A. Lightcap, M.D.**  
1980-81 President

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# Monitoring patient response to Valium® (diazepam/Roche)

## Assessing initial response to therapy



During the first follow-up visit after initiating therapy, both physician and patient should determine if Valium (diazepam/Roche) is having the desired effect. Most patients will promptly report a feeling of relaxation and relief of anxiety-linked symptoms such as insomnia, headaches, palpitations and hyperventilation. You will probably observe that the patient is calmer and more relaxed. If, however, patient response does not measure up to expectations, a reevaluation of the patient's profile with modification of the dosage regimen should be considered.



## Making dosage adjustments

START	ADJUST

With any psychoactive medication it is good medical practice to initiate therapy at base dosage levels and titrate to the patient's needs. With Valium, experience has shown that 5 mg t.i.d. is usually sufficient although some patients with severe or persistent anxiety may require higher dosages initially. In geriatric or debilitated patients, the recommended dosage is 2 to 2½ mg once or twice daily.

When anxiety fluctuates, as is common with most patients, the dosage may be adjusted as needed during the course of therapy; three strengths in scored tablets give you unmatched flexibility and simplicity in individualizing dosage.

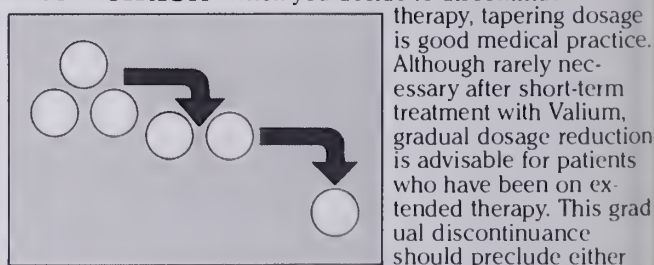
## Evaluating progress toward therapeutic goals

SET GOALS						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

At the beginning of therapy it is now common practice for both physician and patient to establish treatment goals and to estimate the amount of time needed to achieve them. Then the patient knows what to expect and when to expect it.

Some physicians find that compiling a checklist of presenting symptoms and complaints is useful for assessing the patient's response from visit to visit. In this way, progress toward attainment of the therapeutic goal is reviewed at regular intervals. As patients feel their symptoms abate and begin to develop insight into the sources of their anxiety and psychic tension, the checklist can be expected to dwindle.

## Discontinuing pharmacologic intervention



When you decide to discontinue therapy, tapering dosage is good medical practice. Although rarely necessary after short-term treatment with Valium, gradual dosage reduction is advisable for patients who have been on extended therapy. This gradual discontinuance should preclude either

recurrence of pretreatment symptoms or development of untoward side effects. Symptoms of withdrawal have almost always been associated with abrupt discontinuance of therapy at higher dosages taken continuously over long periods of time.

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See the following page for a summary of product information.



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**Indications:** Tension and anxiety associated with anxiety disorders, transient situational disturbances and functional or organic disorders, psychoneurotic states manifested by tension, anxiety apprehension fatigue depressive symptoms or agitation, symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, ataxia, still-man syndrome, convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam Roche) in long term use, that is, more than 4 months has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication. Abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d. alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed, adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d. adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500, Tei-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10. Prescription Paks of 50, available in trays of 10.



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This was not taken at Epsom Downs or the Belmont Stakes, but at the 1980 annual session in Montgomery. No explanation was provided for what Aubrey L. Sewell, M.D., Winfield, and MASA Health Planning Director Tony Crowe were looking at, but it seemed as good an opener as any for pictures of this year's event, on the following pages. . . .



## On The Cover

The 1979-80 President of the Medical Association of the State of Alabama is a veteran supporter of organized medicine: C. A. Lightcap, M.D., Mobile, where he has been in practice since 1946.

A native of Bessemer, Dr. Lightcap received his B.S. degree from the University of Alabama. After attending the University medical school for two years, he transferred to Jefferson College, Philadelphia, receiving his M.D. degree in 1941.

He interned at Charity Hospital, New Orleans, and served with the U.S. Army during World War II in the Panama Canal Zone. A former president of the Medical Society of Mobile County, he has served on the Board of Censors and has also been active in Mobile school board and personnel board work.

Chairman of the Board of Mutual Assurance Society of Alabama, he was one of the more active physicians in the pre-formation work of the Society.

Dr. Lightcap is married to the former Cecile McHale of Tampa, Fla. They have nine children and 13 grandchildren. Dr. Lightcap's hobby is gardening.

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Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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**Length of Articles:** Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

**Illustrations:** Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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## From the Executive Director

### Medical Market Failure

Much attention has been focused in recent years on the workings and perceived failures of the medical marketplace.

Government bureaucrats (that "tree full of owls," in the vivid phrase of a General several years ago) have readily faulted physicians for "market failure" in health care.

"Market failure" is the economists' term for the disruption of natural forces that otherwise tend to restrain prices and make the competitive free enterprise system work. Doctors and hospitals, the bureaucrats charge, are mainly accountable for market failure in the health care industry. They do not really compete, the instant experts charge, either among themselves or in the goods and services they control—hospitalization, tests, drugs, and the rest. Added to this, the charge has been, third-party payors contribute to market failure by merely underwriting, and passing on, spiraling costs, without any effective control over them.

Two years ago, an insurance executive attending a national conference on health care costs in Washington described this situation rather homily in this fashion: "Nobody gives a damn. The doctor doesn't give a damn what it costs. The hospital doesn't give a damn. The patient doesn't give a damn. And the insurance company doesn't give a damn."

Through the Voluntary Effort and jawboning within the profession, physicians and hospitals have shown they do care and have, through their efforts, dramatically reduced rising costs.

But the federal government itself still doesn't seem to care. It is constantly generating more and more upward pressure on prices through inflationary overregulation; by its insistence on nonessential health-related services; by its proliferation of mandated programs; and by its absolute refusal in the case of Medicaid to take any steps to restrain overutilization by such proven devices as co-pay and family responsibility.

The market failure in Medicaid, then, is directly and demonstrably the work of the federal government. While Washington requires states to participate in funding the program, which grows increasingly costly, it refuses to allow states to impose rules to place patients at risk in their demand for services. Co-pay is specifically disallowed, family responsibility ignored, and many other programs—such as those for the blind and disabled and dependent children—are bradded onto Medicaid with automatic eligibility.

States are handed federal guidelines, regulations and edicts and told to pay up and shut up.

Gov. Fob James has analyzed this as the fundamental reason for Medicaid market failure, petitioning Congress for relief. Obviously such thinking as his represents a growing awareness that innovative measures are needed to prevent federally imposed market failure from pushing the cost of Medicaid far beyond the capacity of this and other states to support.

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PHYSICIANS WANTED—Multi-Specialty Group now forming adjacent to hospital. Need Family Practice, Internist, Surgeon. Central Alabama city of 25,000 with 40,000 trade area. Fastest growing area in south. Accredited schools, balanced economy, cultural and recreational opportunities galore. Area lakes for fishing, camping, water sports. Hunting for deer, turkey, dove, quail, squirrel. City of 200,000 15 miles away via Interstate. Send resume to Box A, P. O. Box 1900-C, Montgomery, AL 36104.

EMERGENCY PHYSICIAN—Position available to join large multi-specialty Clinic as staff emergency physician. Associated with 600(+) bed medical center complex, large house-staff program with teaching responsibility. \$60,000+ benefits 1st year with potential significant increases and full partnership. Board eligible or residency training preferred. Send resume to: Ron Berry, M.D. Emergency Medicine, Norwood Clinic P. O. Box C-230, Birmingham, Alabama 35283.

## President's Message



Luther L. Hill, M.D.  
President

## Introducing Dr. Lightcap

I could not make my exit as your 1979-80 President without commending to your attention the many excellences of my successor, C. A. Lightcap, M.D., of Mobile, President for 1980-81.

Few physicians in our Association have devoted more time, talent and energy to our common causes than Dr. Lightcap. He was one of the principal negotiators back in those dark days several years ago when it appeared that all malpractice insurance carriers would withdraw from the state. From the chairmanship of MASA's Committee on Insurance, he moved easily and ably into the job of Chairman of the Board of Directors of Mutual Assurance Society of Alabama.

Past President and member of the Board of Trustees of the Mobile County Medical Society, Dr. Lightcap has been in busy practice in the port city since World War II, somehow finding time to serve his community in school and personnel board work as well.

He has been a tireless worker in the vineyards of organized medicine, having seen early the dangers of the times that are now upon us. Dr. Lightcap thus brings to the presidency vast experience, seasoned judgment and the kind of selfless dedication without which our profession might have perished long ago.

*Luther Hill*





# Tagamet®

brand of

## cimetidine

### How Supplied:

Pale green 300 mg. tablets  
in bottles of 100 and Single Unit Packages of 100  
(intended for institutional use only).

Injection, 300 mg./2 ml.,  
in single-dose vials  
and in 8 ml. multiple-dose vials,  
both in packages of 10.

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# $\alpha$

## Alpha Stimulation

Central Control of  
Blood Pressure\*

The Family of Man by Roberto Moretti,  
a statuary in crystal symbolizing the broad range of  
hypertensive patients eligible for therapy with Catapres





# The Alpha Advantage:

**It's for all kinds of hypertensives**

- Unlike beta blockers, Catapres® has no contraindications.
- Catapres can be useful even in these patients with:

Congestive heart failure	Allergic rhinitis
Ventricular hypertrophy	Hepatic disease
Hyperglycemia	Hyperuricemia
Diabetes mellitus	Gouty arthritis
Bronchial asthma	Sulfonamide hypersensitivity

Like any antihypertensive, use with caution in severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

**work/play**—normal hemodynamic responses to exercise maintained.

**love**—low incidence of impotence and/or loss of libido:  
2.8% in 1,923 patients studied.<sup>1</sup>

**cardiac output**—tends to return to control values during long-term therapy.

**blood flow**—preserved in kidney.

*No Single Advantage Determines Drug Choice.*

Other factors must include:

The drug's effectiveness in a given patient, its side effects, warnings, precautions, tolerance, etc. A rational therapeutic choice depends on a careful assessment of all such factors.

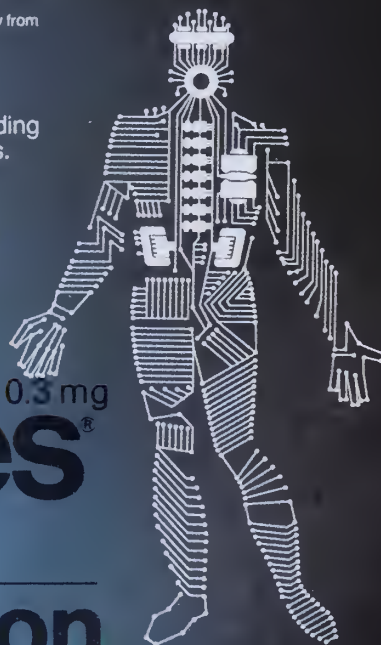
\* Central alpha-adrenergic stimulation decreases sympathetic outflow from the brain, as shown in animal studies.

† Data on file at Boehringer Ingelheim Ltd.

Please see last page for brief summary, including warnings, precautions, and adverse reactions.

**Now available in new  
0.3 mg tablets**

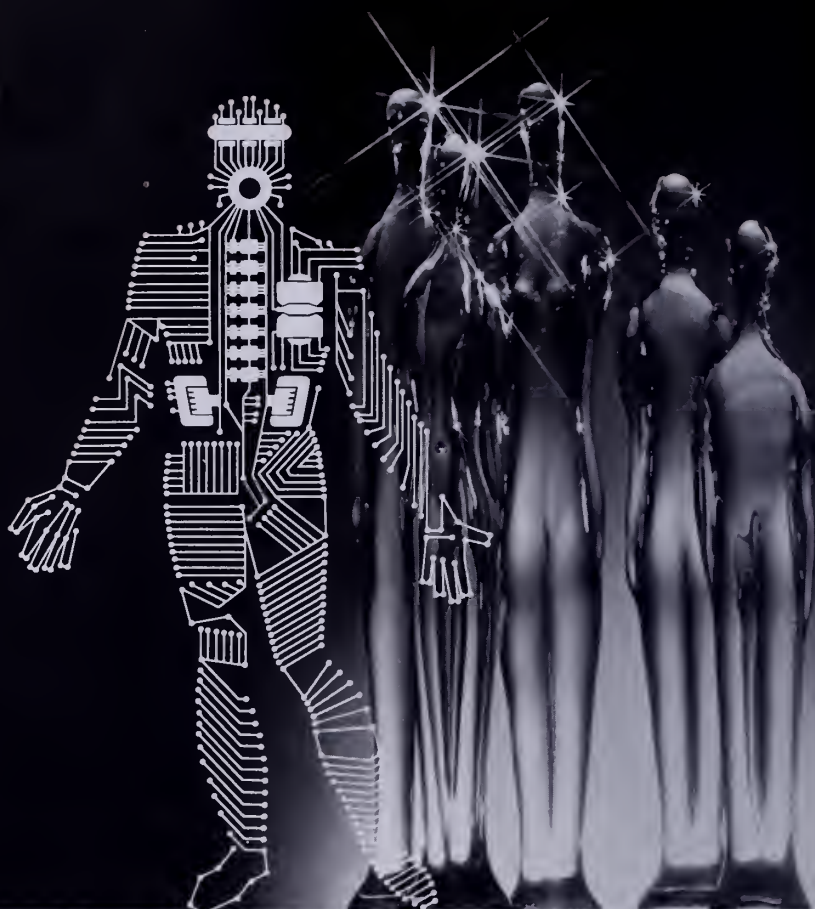
Tablets of 0.1, 0.2, 0.3 mg  
**Catapres**<sup>®</sup>  
(clonidine HCl)  
**Hypertension**





# The Alpha Advantage: It's for all kinds of hypertensives

Tablets of 0.1, 0.2, 0.3 mg  
**Catapres**  
(clonidine HCl)  
**Hypertension**



- No contraindications.
- Effective in all degrees of hypertension. It is mild to moderate in potency.
- Low incidence of depression, impotence, orthostatic hypotension—no fatal hepatotoxicity.
- Preserves kidney blood flow.

Most common side effects are dry mouth, drowsiness, and sedation which generally tend to diminish with time.

**Catapres®**  
(clonidine hydrochloride)  
Tablets of 0.1, 0.2, 0.3 mg

**Indication:** The drug is indicated in the treatment of hypertension. As an antihypertensive drug, Catapres (clonidine hydrochloride) is mild to moderate in potency. It may be employed in a general treatment program with a diuretic and/or other antihypertensive agents as needed for proper patient response.

**Warnings:** Tolerance may develop in some patients necessitating a reevaluation of therapy.

**Usage in Pregnancy:** In view of embryotoxic findings in animals, and since information on possible adverse effects in pregnant women is limited to uncontrolled clinical data, the drug is not recommended in women who are or may become pregnant unless the potential benefits outweigh the potential risk to mother and fetus.

**Usage in Children:** No clinical experience is available with the use of Catapres (clonidine hydrochloride) in children.

**Precautions:** When discontinuing Catapres (clonidine hydrochloride), reduce the dose gradually over 2 to 4 days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients should be instructed not to discontinue therapy without consulting their physician. Rare instances of hypertensive encephalopathy and death have been recorded after cessation of clonidine hydrochloride therapy. A causal relationship has not been established in these cases. It has been demonstrated that an excessive rise in blood pressure, should it occur, can be reversed by resumption of clonidine hydrochloride therapy or by intravenous phentolamine. Patients who engage in potentially hazardous activities, such as operating machinery or driving, should be advised of the sedative effect. This drug may enhance the CNS-depressive effects of alcohol, barbiturates and other sedatives. Like any other agent lowering blood pressure, clonidine hydrochloride should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

As an integral part of their overall long-term care, patients treated with Catapres (clonidine hydrochloride) should receive periodic eye examinations. While, except for some dryness of the eyes, no drug-related abnormal ophthalmologic findings have been recorded with Catapres (clonidine hydrochloride), in several studies the drug produced a dose-dependent increase in the incidence and severity of

The usual starting dose of Catapres is 0.1 mg at breakfast and 0.1 mg at bedtime. Some patients may benefit from a starting dose of 0.1 mg at bedtime.

Usual daily dose range—0.2—0.8 mg

Maximum daily dose—2.4 mg  
Doses as high as this have rarely been employed.

For optimal results, the dose of Catapres must be adjusted according to the patient's individual blood pressure response.

spontaneously occurring retinal degeneration in albino rats treated for 6 months longer.

**Adverse Reactions:** The most common reactions are dry mouth, drowsiness, and sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In some instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormalities in liver function tests; one report of possible drug-induced hepatitis without icterus and hyperbilirubinemia in a patient receiving clonidine hydrochloride, chloral hydrate, and papaverine hydrochloride. Weight gain, transient elevation of blood glucose, or serum creatine phosphokinase; congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes, nervousness, restlessness, anxiety and mental depression. Also rash, gioneuritic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness or burning of the eyes, dryness of the nasal mucosa, pallor, gynecomastia, weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.

**Overdosage:** Profound hypotension, weakness, somnolence, diminished or absent reflexes and vomiting followed the accidental ingestion of Catapres (clonidine hydrochloride) by several children from 19 months to 5 years of age. Gastric lavage and administration of an analeptic and vasopressor led to complete recovery within 24 hours. Tolazoline in intravenous doses of 10 mg at 30-minute intervals usually abolishes all effects of Catapres, (clonidine hydrochloride) on dosage.

**How Supplied:** Catapres, brand of clonidine hydrochloride, is available as 0.1 mg (tan) and 0.2 mg (orange) oval, single-scored tablets in bottles of 100 and 1000. Also available as 0.3 mg (peach) oval, single-scored tablets in bottles of 100.

For complete details, please see full prescribing information.  
Under license from Boehringer Ingelheim GmbH



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Ridgefield, CT 06877



# 119th Annual Session of MASA



Silas W. Grant, M.S., Associate Dean, School of Primary Care, Huntsville, renews an old friendship with John B. M. Rice, Jr., M.D., Florence, past president, as the two share their experiences as Family Practitioners. Annual session is like that—work and leisure are so intertwined it's often impossible to tell where one ends and the other begins. And that, as much as anything, is why such meetings of colleagues are not only pleasant but enormously beneficial professionally.



Hoyt C. Gardner, M.D., President of the American Medical Association, spoke fluently and with precision on the indispensable functions of organized medicine in a period of relentless attack on private practice from all sides. Two views of his speech, perhaps symbolic, appear on these two pages—first in normal lighting, which is the way physicians would like to remain, free of the harsh, half-light in the picture on the right, and from public scrutiny that sees only what it wants to see.



To his chagrin and dismay, Dr. Gardner is often asked by impatient physicians (who may merely tolerate organized medicine but want to appear broadminded) a question like this: "I have five minutes; tell me about the AMA."

Dr. Gardner's response has evolved into this:

"What two weeks would you like to take off and go with me around the country?"

Dr. Gardner is not, of course, being facetious. Organized medicine, from local to national levels, is now fighting for survival on so many fronts—legal, political, legislative, administrative, etc.—any suggestion that such a complex war can be capsuled in a brief spiel is utterly pointless.





**“Therapy Today”** was the theme of the scientific sessions, concentrating on cardiovascular disease, geriatrics, cancer and antibiotics in pediatrics.



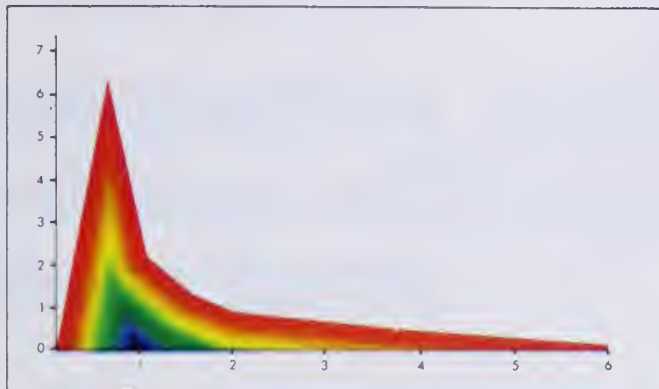
#### OXYGEN IN ACUTE MYOCARDIAL

##### INDICATION: HYPOXIA

1. CUSTOMARILY ADMINISTERED – ESPECIALLY IN TRANSPORT
2. CAN  $\downarrow$  PERIPH. VASC. RESIST AND SLIGHTLY  $\downarrow$  C.O.
3. USE FOR CYANOSIS, TACHYCARDIA, CHF, SHOCK, DYSPNEA, COUGH, WHEEZING,  $\downarrow$  RESP RATE, RESPIR. DEPRESSION (II)
4. REBREATHING MASK, OR VENTURI MASK IN C.O.P.D., NASAL PRONGS
5. Rawles & Kenmore: 200 PTS, O<sub>2</sub> OR AIR (BMJ 1: 1121, '76)
  - NO DIFFERENCE IN DEATHS, HOSP. STAY, NARCOTIC NEED, SYST. TIME INTERVALS, ARRHYTHMIAS
  - $\downarrow$  SINUS BRADY,  $\downarrow$  ENZYME LEVELS

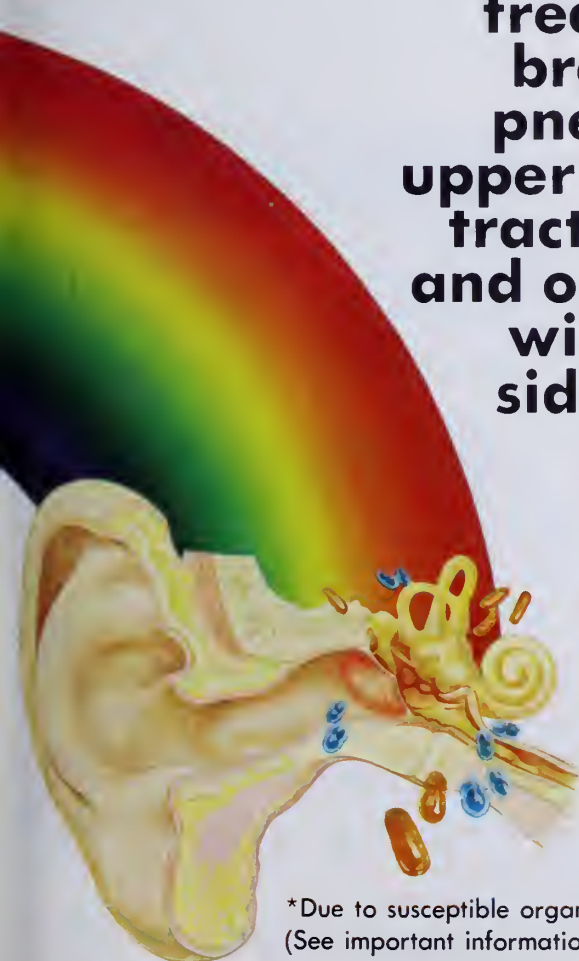


more  
than just spectrum

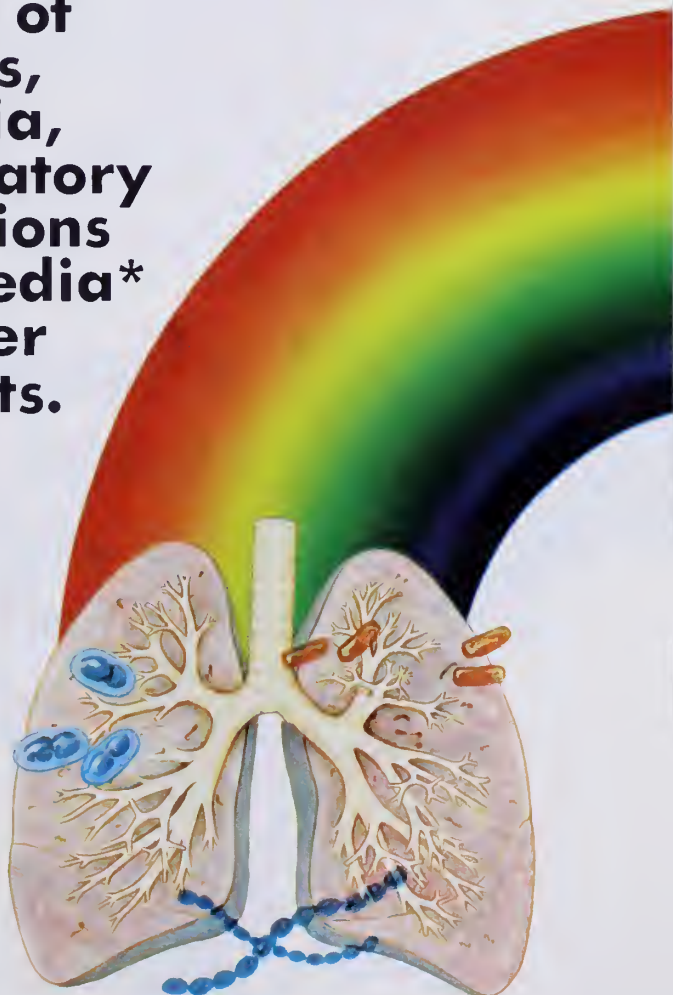


New **CYCLAPEN**<sup>®</sup>  
(cyclacillin) Tablets/  
Suspension

**Efficacy  
proven in the  
treatment of  
bronchitis,  
pneumonia,  
upper respiratory  
tract infections  
and otitis media\*  
with fewer  
side effects.**



\*Due to susceptible organisms  
(See important information on last page.)



# New **CYCLAPEN**<sup>®</sup>

(cyclacillin) Tablets/  
Suspension

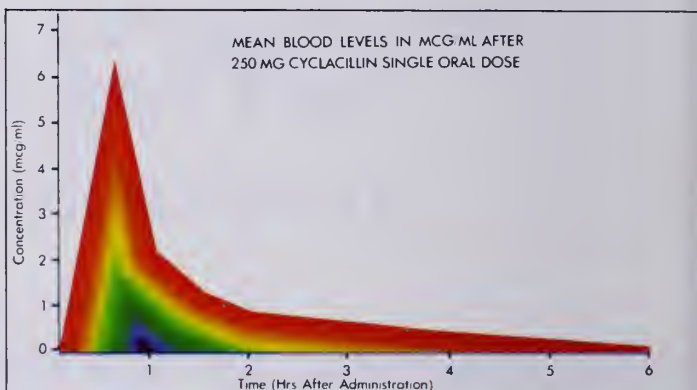
## efficacy with fewer side ampicillin confirmed in studies of 2,581

Rapid, virtually complete  
absorption from GI tract

Rapid onset of action—  
mean peak serum levels  
within 30 minutes

Exceptionally high peak  
blood levels—3 times  
greater than ampicillin  
(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



High cure rate with CYCLAPEN <sup>®</sup>		
Causative Organism	Bronchitis/Pneumonia <sup>†</sup>	No. of Patients
<i>S. pneumoniae</i>	100	73
	95	
Chronic Bronchitis <sup>†</sup> (acute exacerbation)		
<i>H. influenzae</i>	92	12
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>	
Streptococcal Sore Throat <sup>†</sup>		
Group A beta-hemolytic Streptococcus	100	44
	86	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

### more than just spectrum in bronchitis, pneumonia and upper respiratory tract infections<sup>†</sup>

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.

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# effects than double-blind patients\*

Fewer side effects with CYCLAPEN® in  
double-blind studies to date<sup>1,2</sup>

Total number of drug-related side effects in all patients	
CYCLAPEN®	128 of 1,286 (10%) of patients
ampicillin	202 of 1,129 (18%) of patients
Difference statistically significant ( $P < 0.001$ )	

## CYCLAPEN® (cyclacillin)

Effective for bronchitis, pneumonia,  
and upper respiratory tract infections†

- Excellent clinical results in bronchitis,  
pneumonia and upper respiratory tract  
infections
- Significantly lower incidence of diarrhea  
and skin rash

1. Gold JA, Hegarty CP, Deitch MW, Walker BR:  
Double-blind clinical trials of oral cyclacillin  
and ampicillin, *Antimicrob Ag Chemother*  
15:55-58, (Jan.) 1979.

2. Data on file, Wyeth Laboratories.

**Wyeth Laboratories**  
Philadelphia, Pa 19101



## more than just spectrum in otitis media

Clinical efficacy of CYCLAPEN® in otitis media†

Causative Organism		No. of Patients
<i>S. pneumoniae</i>	96	82
	95	
<i>H. influenzae</i>	88	96
	85	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

# more than just spectrum CYCLAPEN® (cyclacillin)

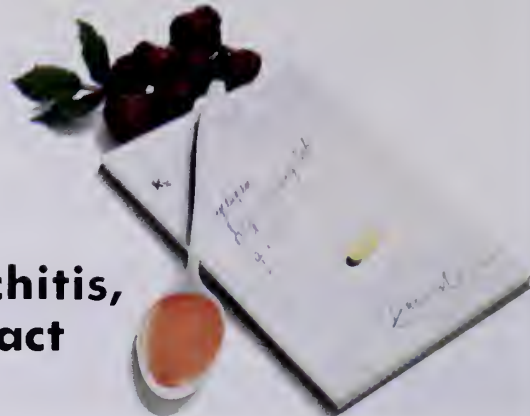
Tablets/  
Suspension

New from Wyeth Laboratories

# CYCLAPEN<sup>®</sup>

(cyclacillin) Tablets/  
Suspension

more than just spectrum in bronchitis,  
pneumonia, upper respiratory tract  
infections and otitis media\*



- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes
- Exceptionally high peak blood levels—3 times greater than ampicillin (clinical efficacy may not always correlate with blood levels)
- Rapidly excreted unchanged in the urine—1½ times faster than ampicillin
- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date
- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients
- New CYCLAPEN<sup>®</sup> Suspension—great-tasting raspberry punch flavor

\*Due to susceptible organisms.

**How Supplied**  
CYCLAPEN<sup>®</sup> (cyclacillin)  
tablets:  
250 mg scored tablets  
500 mg scored tablets

#### Indications

Cyclapen<sup>®</sup> (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below.

Cyclapen<sup>®</sup> is indicated for the treatment of the following infections:

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci. Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*).

Otitis Media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*.

Acute exacerbation of chronic bronchitis caused by *H. influenzae*.\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

**SKIN AND SKIN STRUCTURES** (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

**URINARY TRACT INFECTIONS** caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections.)

**NOTE:** Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing.

#### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins.

#### Warnings

CYCLACILLIN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT.

CYCLACILLIN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS. SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN. ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN BEFORE THERAPY WITH A PENICILLIN. CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED.

#### Precautions

Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken.

**PREGNANCY:** Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**NURSING MOTHERS:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman.

#### Adverse Reactions

The oral administration of cyclacillin is generally well tolerated.

As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

CYCLAPEN<sup>®</sup> (cyclacillin) for oral suspension

125 mg per 5 ml:

100 ml and 200 ml bottles

250 mg per 5 ml:

100 ml and 200 ml bottles

hypersensitivity to penicillins or in those with a history of allergy, asthma, hay fever, or urticaria.

The following adverse reactions have been reported with the use of cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS.)

Other less frequent adverse reactions which may occur and that have been reported during therapy with other penicillins are: anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

#### Dosage and Administration

##### INFECTION\* ADULTS

INFECTION*	ADULTS	CHILDREN
		Dosage should not result in a dose higher than that for adults.
Respiratory Tract Infections**	250 mg q.i.d. in equally spaced doses	body weight < 20 kg (44 lbs) 125 mg q.i.d. in equally spaced doses body weight > 20 kg (44 lbs) 250 mg q.i.d. in equally spaced doses

INFECTION*	ADULTS	CHILDREN
Bronchitis and Pneumonia	250 mg q.i.d. in equally spaced doses	50 mg/kg/day q.i.d. in equally spaced doses
Mild or Moderate Infections	500 mg q.i.d. in equally spaced doses	100 mg/kg/day q.i.d. in equally spaced doses
Chronic Infections	250 mg q.i.d. in equally spaced doses	50 to 100 mg/kg/day in equally spaced doses depending on severity
Otitis Media	250 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Skin & Skin Structures	250 mg q.i.d. in equally spaced doses depending on severity	100 mg/kg/day in equally spaced doses
Urinary Tract	500 mg q.i.d. in equally spaced doses	

\*As with antibiotic therapy generally treatment should be continued for a minimum of 48 to 72 hours after the patient becomes asymptomatic or until evidence of bacterial eradication has been obtained.

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum of 10 days of treatment is recommended to guard against the risk of rheumatic fever or glomerulonephritis.

In the treatment of chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and may be required for several months afterwards.

Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

**Patients with Renal Failure:** Based on a dosage of 500 mg q.i.d. the following adjustment in dosage interval is recommended:

Patients with a creatinine clearance of < 50 ml/min need no dosage interval adjustment.

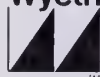
Patients with a creatinine clearance of 30-50 ml/min should receive full doses every 12 hours.

Patients with a creatinine clearance of between 15-30 ml/min should receive full doses every 18 hours.

Patients with a creatinine clearance of between 10-15 ml/min should receive full doses every 24 hours.

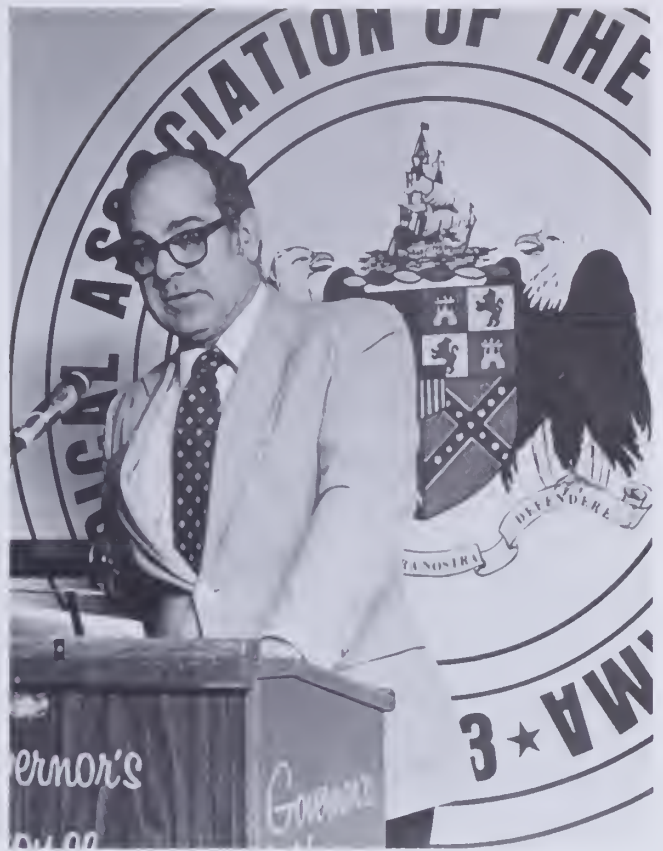
In patients with a creatinine clearance of < 10 ml/min or serum creatinine values of > 10 mg % serum cyclacillin levels are recommended to determine both subsequent dosage and frequency.

Wyeth Laboratories  
Philadelphia, Pa 19101





Orientation was well  
attended.





Leon C. Hamrick, M.D. left, Chairman of the Board of Censors, and Ron C. Henderson, M.D., Board member, were fairly typical of many who attended social functions only to remain engaged in obviously serious talk.

- provides effective symptomatic relief
- b.i.d. dosage simplifies therapy
- scored tablet for dosage flexibility

## OPTIMINE®

azatadine maleate, 1 mg. tablets

**CONTRAINDICATIONS** Use in Newborn or Premature Infants. This drug should not be used in newborn or premature infants.

Use in Nursing Mothers. Because of the higher risk of antihistamines for infants generally and for newborns and prematures in particular, antihistamine therapy is contraindicated in nursing mothers.

Use in Lower Respiratory Disease. Antihistamines should NOT be used to treat lower respiratory tract symptoms including asthma.

Antihistamines are also contraindicated in the following conditions: hypersensitivity to azatadine maleate and other antihistamines of similar chemical structure; monoamine oxidase inhibitor therapy (See DRUG INTERACTIONS Section).

**WARNINGS** Antihistamines should be used with considerable caution in patients with: narrow angle glaucoma; stenosing peptic ulcer; pyloroduodenal obstruction; symptomatic prostatic hypertrophy; bladder neck obstruction.

Use in Children. In infants and children especially, antihistamines in overdosage may cause hallucinations, convulsions, or death.

As in adults, antihistamines may diminish mental alertness in children. In the young child, particularly, they may produce excitation.

OPTIMINE TABLETS ARE NOT INTENDED FOR USE IN CHILDREN UNDER 12 YEARS OF AGE.

Use in Pregnancy. Experience with this drug in pregnant women is inadequate to determine whether there exists a potential for harm to the developing fetus.

Use with CNS Depressants. Azatadine maleate has additive effects with alcohol and other CNS depressants (hypnotics, sedatives, tranquilizers, etc.).

Use in Activities Requiring Mental Alertness. Patients should be warned about engaging in activities requiring mental alertness, such as driving a car or operating appliances, machinery, etc.

Use in the Elderly (approximately 60 years or older): Antihistamines are more likely to cause dizziness, sedation, and hypotension in elderly patients.

**PRECAUTIONS** Azatadine maleate has an atropine-like action and, therefore, should be used with caution in patients with: a history of bronchial asthma; increased intraocular pressure; hyperthyroidism; cardiovascular disease; hypertension.

**DRUG INTERACTIONS** MAO inhibitors prolong and intensify the anticholinergic (drying) effects of antihistamines.

**ADVERSE REACTIONS** The most frequent adverse reactions are underlined.

*General:* Urticaria, drug rash, anaphylactic shock, photosensitivity, excessive perspiration, chills, dryness of mouth, nose, and throat.

*Cardiovascular System:* Hypotension, headache, palpitations, tachycardia, extrasystoles.

*Hematologic System:* Hemolytic anemia, thrombocytopenia, agranulocytosis.

*Nervous System:* Sedation, sleepiness, dizziness, disturbed coordination, fatigue, confusion, restlessness, excitation, nervousness, tremor, irritability, insomnia, euphoria, paresthesias, blurred vision, diplopia, vertigo, tinnitus, acute labyrinthitis, hysteria, neuritis, convulsions.

*Gastrointestinal System:* Epigastric distress, anorexia, nausea, vomiting, diarrhea, constipation.

*Genitourinary System:* Urinary frequency, difficult urination, urinary retention, early menses.

*Respiratory System:* Thickening of bronchial secretions, tightness of chest and wheezing, nasal stuffiness.

**OVERDOSAGE** Antihistamine overdosage reactions may vary from central nervous system depression to stimulation. Stimulation is particularly likely in children. Atropine-like signs and symptoms (dry mouth; fixed, dilated pupils; flushing, and gastrointestinal symptoms) may also occur.

If vomiting has not occurred spontaneously, the patient should be induced to vomit. This is best done by having him drink a glass of water or milk after which he should be made to gag. Precautions against aspiration must be taken, especially in infants and children.

If vomiting is unsuccessful, gastric lavage is indicated within three hours after ingestion and even later if large amounts of milk or cream were given beforehand. Isotonic and 1/2 isotonic saline is the lavage solution of choice.

Saline cathartics, such as milk of magnesia, draw water into the bowel by osmosis and therefore are valuable for their action in rapid dilution of bowel content.

Stimulants should not be used.

Vasopressors may be used to treat hypotension.

FEBRUARY 1977

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For more complete details, consult package insert or Schering literature available from your Schering Representative or Professional Services Department, Schering Corporation, Kenilworth, New Jersey 07033.

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SWW-417 I



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THINK  
**OPTIMINE<sup>®</sup>**  
azatadine maleate, 1 mg. tablets  
**FIRST**  
for relief of allergy symptoms  
Rx only

Please see adjacent brief summary of prescribing information.  
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The press conference was dominated by television. Here the lights and cameras fix on Hoyt C. Gardner, M.D., AMA President, shortly after his Orientation speech.

## An apple a day won't keep alcoholism away!

The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

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J.C.A.H. ACCREDITED





James D. Hardy, M.D., University of Mississippi School of Medicine, gave the Jerome Cochran lecture on organ replacement, interspersing a highly informative presentation with frequent witticisms directed at himself.

A Derrill Crowe, M.D., President of Mutual Assurance Society of Alabama, told the Orientation audience that 1 in 9 Alabama physicians now faces a claim or suit. Just 10 years ago, that ratio was 1 in 50. The future success and prosperity of Mutual Assurance depends almost entirely on responsible actions of Alabama physicians, since 94% of the premium dollar relates directly to claims, which physicians control by their actions.



## The Enforcers

A strict dress code was enforced at all times during business and social sessions. Shown are two of the chief enforcers (self-appointed): Charles W. Pruet, M.D., Lauderdale; and Kenneth C. Yohn, M.D., Barbour.



C. A. Lightcap, M.D., left, President of MASA for 1980-81, presents a plaque recognizing the 1979-80 service of Immediate Past President Luther L. Hill, M.D.



Hoyt C. Gardner, M.D., President of the AMA, third from left, was leaving Montgomery for another stop on his endless speaking circuit when this picture was taken. Thanking him for his Orientation address, are, left to right, Leon C. Hamrick, M.D., Chairman, Board of Censors; S. Lon Conner, Executive Director, MASA; Dr. Gardner; and Ira L. Myers, M.D., State Health Officer.



Photographs presented on these pages may give some idea of the flavor of the party preceding the awards night banquet.



*Morris E. Chafetz, M.D.,  
Founding Director of the National  
Institute on Alcohol Abuse and Alcoholism,  
is pleased to announce  
the opening of a private  
residential alcoholism treatment facility  
in Charleston, South Carolina.*



# FENWICK HALL

*John H. Magill, Executive Director. Layton McCurdy, M.D., Medical Director. Phone 803-559-2461.*



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Pneumococcus

1. provides broad-spectrum, overlapping antibacterial effectiveness against common susceptible pathogens, including staph and strep
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by NASA for  
the Apollo and  
Skylab missions

## NEOSPORIN<sup>®</sup> Ointment

(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin<sup>®</sup> (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

**PRECAUTIONS:** As with other antibacterial preparations,

prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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North Carolina 27709

# Perdiem<sup>™</sup> empties the bowel gently... by filling it.

Perdiem<sup>™</sup> . . . the re-educative laxative  
. . . relieves constipation by a unique combination of  
physiological bulk stimulus and gentle pharmacologic  
encouragement of peristaltic response.



WILLIAM H. RORER, INC.  
Fort Washington, PA 19034



Sluggishness of  
the Bowels



Constipation



Chronic  
Constipation



Habituation to  
Laxatives



Abuse of  
Laxatives



# Perdiem™

## Prescribing Information

**ACTIONS:** Perdiem™, with its gentle action, does not produce disagreeable side effects. The vegetable mucilages of Perdiem™ soften the stool and provide pain-free evacuation of the bowel. Perdiem™ is effective as an aid to elimination for the hemorrhoid or fissure patient prior to and following surgery.

**COMPOSITION:** Natural vegetable derivatives. A unique blend of psyllium and senna (Plonrago Hydrocolloid with Cassia Pod Concentrate).

**INDICATION:** For relief of constipation.

**PATIENT WARNING:** Should not be used in the presence of undiagnosed abdominal pain. Frequent or prolonged use without the direction of a physician is not recommended. Such use may lead to laxative dependence.

**DIRECTIONS FOR USE—ADULTS:** Before breakfast and after the evening meal, one to two rounded teaspoonfuls of Perdiem™ granules should be placed in the mouth and swallowed with a full glass of warm or cold beverage. Perdiem™ granules should not be chewed. After Perdiem™ takes effect (usually after 24 hours, but possibly not before 36-48 hours), reduce the morning and evening doses to one rounded teaspoonful. Subsequent doses should be adjusted after adequate laxation is obtained.

**IN OBSTINATE CASES:** Perdiem™ may be taken more frequently, up to two rounded teaspoonfuls every six hours.

**FOR PATIENTS HABITUATED TO STRONG PURGATIVES:** Two rounded teaspoonfuls of Perdiem™ in the morning and evening may be required along with half the usual dose of the purgative being used. The purgative should be discontinued as soon as possible and the dosage of Perdiem™ granules reduced when and if bowel tone shows lessened laxative dependence.

**FOR COLOSTOMY PATIENTS:** To ensure formed stools, give one to two rounded teaspoonfuls of Perdiem™ in the evening with worm liquid.

**DURING PREGNANCY:** Give one to two rounded teaspoonfuls each evening.

**FOR CLINICAL REGULATION:** For patients confined to bed, for those of inactive habits, and in the presence of cardiovascular disease where straining must be avoided, one rounded teaspoonful of Perdiem™ taken once or twice daily will provide regular bowel habits. Take with a full glass of water or beverage.

**FOR CHILDREN:** From age 7—11 years, give one rounded teaspoonful one to two times daily. From age 12 and older, give adult dosage.

**NOTE:** It is extremely important that Perdiem™ should be taken with a plentiful supply of liquid.

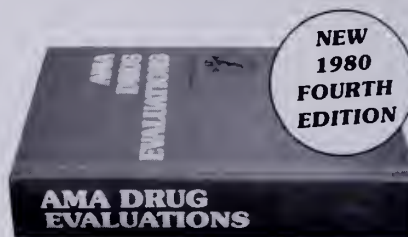
**HOW SUPPLIED:** Granules, 100 gram (3.5 oz) and 250 gram (8.8 oz) containers.



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penicillin V potassium

is the most  
widely prescribed  
brand of oral penicillin



Tablets  
125, 250, and 500 mg\*  
Oral Solution  
125 and 250 mg\*/5 ml

**V-Cillin K<sup>®</sup>**  
**penicillin V potassium**

**Description:** V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

**Indications:** For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

**Contraindication:** Previous hypersensitivity to penicillin.

**Warnings:** Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies

before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

**Precautions:** Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

**Adverse Reactions:** Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin.

(102175)

**\*Equivalent to penicillin V.**

Additional information available to the profession on request.



Eli Lilly and Company  
Indianapolis, Indiana 46206

900410





**The status of Life Counsellors was left unchanged after a spirited and often sharply divided debate, being listened to here by members of the College of Counsellors and House of Delegates.**



**The Young Physicians Conference, established by Dr. Hill as one of his final acts as President, was off and running after this organizational meeting, presided over by Dr. Hill.**



**Dr. Hill speaks briefly to county society officers, invited to this special annual session lunch recognizing their importance to the federation.**



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# WHEN ANXIETY AND TENSION MAGNIFY PAIN

IN MUSCULOSKELETAL DISEASE\*



A non-narcotic one-two punch against pain, with concurrent relief of anxiety/tension

## EQUAGESIC<sup>®</sup> <sup>©</sup>

(meprobamate and ethoheptazine citrate with aspirin) Wyeth

### EQUAGESIC—Abbreviated Summary

**\*INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

“Possibly” effective for the treatment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease or tension headache.

Final classification of the less-than-effective indications requires further investigation.

The effectiveness of Equagesic in long-term use, i.e. more than four months, has not been assessed by systematic clinical studies. The physician should periodically reassess usefulness of the drug for the individual patient.

**CONTRAINDICATIONS:** Equagesic should not be given to individuals with a history of sensitivity or severe intolerance to aspirin, meprobamate, or ethoheptazine citrate.

**WARNINGS:** Careful supervision of dose and amounts prescribed for patients is advised, especially with those patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g., alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on or habituation to the drug. Where excessive dosage has continued for weeks or months, dosage should be reduced gradually rather than abruptly stopped, since withdrawal of a “crutch” may precipitate withdrawal reaction of greater proportions than that for which the drug was originally prescribed. Abrupt discontinuance of doses in excess of the recommended dose has resulted in some cases in the occurrence of epileptiform seizures.

Special care should be taken to warn patients taking meprobamate that tolerance to alcohol may be lowered with resultant slowing of reaction time and impairment of judgement and coordination.

**USAGE IN PREGNANCY AND LACTATION:** An increased risk of congenital malformations associated with the use of minor tranquilizers (meprobamate, chlorid-

azepoxide, and diazepam) during the first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of child-bearing potential may be pregnant at the time of institution of therapy should be considered. Patients should be advised that if they become pregnant during therapy or intend to become pregnant they should communicate with their physicians about the desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical-cord blood and in near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breast-feeding patients, the drug's higher concentrations in breast milk as compared to maternal plasma levels should be considered.

Preparations containing aspirin should be kept out of the reach of children. Equagesic is not recommended for patients 12 years of age and under.

**PRECAUTIONS:** Should drowsiness, ataxia, or visual disturbance occur, the dose should be reduced. If symptoms continue, patients should not operate a motor vehicle or any dangerous machinery.

Suicidal attempts with meprobamate have resulted in coma, shock, vasomotor and respiratory collapse, and anuria. Very few suicidal attempts were fatal, although some patients ingested very large amounts of the drug (20 to 40 gm). These doses are much greater than recommended. The drug should be given cautiously, and in small amounts, to patients who have suicidal tendencies. In cases where excessive doses have been taken, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Hyperventilation has been reported occasionally. Any drug remaining in the stomach should be removed and symptomatic treatment given. Should respiration become very shallow and slow, CNS stimulants, e.g., caffeine, Meclazol, or am-

phetamine, may be cautiously administered. If severe hypotension develops, pressor amines should be used parenterally to restore blood pressure to normal levels.

**ADVERSE REACTIONS:** A small percentage of patients may experience nausea with or without vomiting and epigastric distress. Dizziness occurs rarely when meprobamate and ethoheptazine citrate with aspirin is administered in recommended dosage. The meprobamate may cause drowsiness but, as a rule, this disappears as therapy is continued. Should drowsiness persist and be associated with ataxia, this symptom can usually be controlled by decreasing the dose, but occasionally it may be desirable to administer central stimulants such as amphetamine or mephentermine sulfate concomitantly to control drowsiness.

A clearly related side effect to the administration of meprobamate is the rare occurrence of allergic or idiosyncratic reactions. This response develops, as a rule, in patients who have had only 1-4 doses of meprobamate and have not had a previous contact with the drug. Previous history of allergy may or may not be related to the incidence of reactions.

Mild reactions are characterized by an itchy urticarial or erythematous, maculopapular rash which may be generalized or confined to the groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema, and fever have also been reported.

More severe cases, observed only very rarely may also have other allergic responses, including fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case), and hyperthermia. Treatment should be symptomatic such as administration of epinephrine, antihistamine, and possibly hydrocortisone. Meprobamate should be stopped, and resumption of therapy should not be attempted.

Rare cases have been reported where patients receiving meprobamate suffered from aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia. In nearly every instance reported, other toxic agents known to have caused these conditions have been associated with meprobamate. A few cases of leukopenia during

continuous administration of meprobamate are reported, most of these returned to normal without discontinuation of the drug.

Impairment of accommodation and visual acuity has been reported rarely.

**OVERDOSE:** Two instances of accidental or intentional significant overdosage with ethoheptazine citrate combined with aspirin have been reported. These were accompanied by symptoms of CNS depression, including drowsiness and light-headedness, with uneventful recovery. However, on the basis of pharmacological data, it may be anticipated that CNS stimulation could occur. Other anticipated symptoms would include nausea and vomiting. Appropriate therapy of signs and symptoms as they appear is the only recommendation possible at this time. Overdosage with ethoheptazine combined with aspirin would probably produce the usual symptoms and signs of salicylate intoxication. Observation and treatment should include induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions.

**DESCRIPTION:** Each Equagesic tablet contains 150 mg meprobamate, 75 mg ethoheptazine citrate and 250 mg aspirin.

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\*This drug has been evaluated as possibly effective for this indication.

**Wyeth Laboratories**  
Philadelphia, Pa 19101





# FOR MODERATE PAIN

A therapeutic dose  
of acetaminophen  
in one tablet

A therapeutic dose  
of two complementary  
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The convenience and  
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hours as needed

## WHY NOT WYGESIC<sup>®</sup> <sup>©</sup>

(65 mg propoxyphene HCl and 650 mg acetaminophen) Wyeth

### WYGESIC—Abbreviated Summary

**INDICATION:** For the relief of mild-to-moderate pain.  
**CONTRAINDICATION:** Hypersensitivity to propoxyphene or to acetaminophen

**WARNINGS:** CNS ADDITIVE EFFECTS AND OVERDOSE: Propoxyphene in combination with alcohol, tranquilizers, sedative-hypnotics, or other CNS depressants has an additive depressant effect. Patients taking this drug should be advised of the additive effect and warned not to exceed the dosage recommended. Toxic effects and fatalities have occurred following overdoses of propoxyphene alone or in combination with other CNS depressants. Most of these patients had histories of emotional disturbances or suicidal ideation or attempts, as well as misuse of tranquilizers, alcohol, or other CNS-active drugs. Caution should be exercised in prescribing large amounts of propoxyphene for such patients (see **Management of Overdosage**).

**DRUG DEPENDENCE:** Propoxyphene can produce drug dependence characterized by psychic dependence and less frequently, physical dependence and tolerance. It will only partially suppress the withdrawal syndrome in individuals physically dependent on morphine or other narcotics. The abuse liability of propoxyphene is qualitatively similar to codeine, although quantitatively less, and propoxyphene should be prescribed with the same degree of caution appropriate to the use of codeine.

**USAGE IN AMBULATORY PATIENTS:** Propoxyphene may impair the mental and/or physical abilities required for potentially hazardous tasks, e.g., driving a car or operating machinery. Patients should be cautioned accordingly.

**USAGE IN PREGNANCY:** Safe use in pregnancy has not been established relative to possible adverse effects on fetal development. **INSTANCES OF WITHDRAWAL SYMPTOMS IN THE NEONATE HAVE BEEN REPORTED FOLLOWING USAGE DURING PREGNANCY.** Therefore, propoxyphene should not be used in pregnant women unless, in the

judgement of the physician, the potential benefits outweigh the possible hazards.

**USAGE IN CHILDREN:** Propoxyphene is not recommended for children because documented clinical experience has been insufficient to establish safety and a suitable dosage regimen in the pediatric group. **PRECAUTIONS:** Confusion, anxiety, and tremors have been reported in a few patients receiving propoxyphene concomitantly with orphenadrine. The CNS depressant effect of propoxyphene may be additive with other CNS depressants, including alcohol.

**ADVERSE REACTIONS:** The most frequent adverse reactions are dizziness, sedation, nausea, and vomiting. These seem more prominent in ambulatory than in nonambulatory patients; some of these reactions may be alleviated if the patient lies down. Other adverse reactions include constipation, abdominal pain, skin rashes, light-headedness, headache, weakness, euphoria, dysphoria, and minor visual disturbances. The chronic ingestion of propoxyphene in doses over 800 mg per day has caused toxic psychoses and convulsions. Cases of liver dysfunction have been reported.

**DRUG INTERACTIONS:** Propoxyphene in combination with alcohol, tranquilizers, sedative-hypnotics, and other CNS depressants has an additive depressant effect. Patients taking this drug should be advised of the additive effect and warned not to exceed the dosage recommended. (see **Warnings**). Confusion, anxiety, and tremors have been reported in a few patients receiving propoxyphene concomitantly with orphenadrine.

**MANAGEMENT OF OVERDOSSAGE: SYMPTOMS:** The manifestations of serious overdosage with propoxyphene are similar to those of narcotic overdosage and include respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, pupillary constriction, and circulatory collapse. In addition to these characteristics, which are reversed by narcotic antago-

nists such as naloxone, there may be other effects. Overdoses of propoxyphene can cause delay of cardiac conduction as well as focal or generalized convulsions, a prominent feature in most cases of severe poisoning. Cardiac arrhythmias and pulmonary edema have occasionally been reported, and apnea, cardiac arrest, and death have occurred. Symptoms of massive overdosage with acetaminophen may include nausea, vomiting, anorexia, and abdominal pain, beginning shortly after ingestion and lasting for 12 to 24 hours. However, early recognition may be difficult since early symptoms may be mild and nonspecific. Evidence of liver damage is usually delayed. After the initial symptoms, the patient may feel less ill; however, laboratory determinations are likely to show a rapid rise in liver enzymes and bilirubin. In case of serious hepatotoxicity, jaundice, coagulation defects, hypoglycemia, encephalopathy, coma, and death may follow. Renal failure due to tubular necrosis, and myocardopathy, have also been reported.

Ingestion of 10 grams or more of acetaminophen may produce hepatotoxicity. A 13-gram dose has reportedly been lethal.

**TREATMENT:** Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and institution of assisted or controlled ventilation. The narcotic antagonists, naloxone, naltrexone, and levallorphan, are specific antidotes against the respiratory depression produced by propoxyphene. An appropriate dose of one of these antagonists should be administered, preferably IV, simultaneously with efforts at respiratory resuscitation and the antagonist should be repeated as necessary until the patient's condition remains satisfactory. In addition to a narcotic antagonist, the patient may require careful titration with an anticonvulsant to control seizures. Analgesic drugs (e.g., caffeine or amphetamine) should not be used because of their tendency to precipitate convulsions.

Oxygen, IV fluids, vasopressors and other supportive measures should be used as indicated. Gastric lavage may be helpful. Activated charcoal can absorb a significant amount of ingested propoxyphene. Oalsysis is of little value in poisoning by propoxyphene alone. Acetaminophen is rapidly absorbed, and efforts to remove the drug from the body should not be delayed. Copious gastric lavage and/or induction of emesis may be indicated. Activated charcoal is probably ineffective unless administered almost immediately after acetaminophen ingestion. Neither forced diuresis nor hemodialysis appears to be effective in removing acetaminophen. Since acetaminophen in overdose may have an antidiuretic effect and may produce renal damage, administration of fluids should be carefully monitored to avoid overload. It has been reported that mercaptamine (cysteine) or other thiol compounds may protect against liver damage if given soon after overdosage (8-10 hours). N-acetylcysteine is under investigation as a less toxic alternative to mercaptamine, which may cause anorexia, nausea, vomiting, and drowsiness. Appropriate literature should be consulted for further information (JAMA 237:2406-2407, 1977).

Clinical and laboratory evidence of hepatotoxicity may be delayed up to one week. Acetaminophen plasma levels and half-life may be useful in assessing the likelihood of hepatotoxicity. Serial hepatic enzyme determinations are also recommended.

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One of the last pieces of business in the waning hours of the 1980 annual session was the swearing in of new officers of the Association. Left, to right, Alfred Habeeb, M.D., Birmingham, AMA delegate; Jeff H. Beard, M.D., Censor from Mobile; Jack Hyman, M.D., Mobile, Vice President; Kendall Black, M.D., Huntsville, President-elect; C. A. Lightcap, M.D., Mobile, 1980-81 President.

### Waiting in the wings



Another, backlighted view of the above ceremony silhouettes Dr. Black taking the oath as President-elect. A year hence he becomes president. At age 42, he will be one of the youngest chief stewards of the Association in this century. Like the British government, with a shadow cabinet always waiting to step in, MASA prides itself in its unbroken continuity, as the torch is passed from leader to leader, generation to generation.

# Auxiliary



Mrs. Eugene H. Bradley  
President, A-MASA

## *A Step Of Progress*

The Auxiliary year of 1979-1980 is now part of history. The outgoing of old officers and the installation of new officers in our auxiliary neither marks the end of the organization nor does it mark the beginning of the organization. Our auxiliary is an ongoing organization. This merely marks a step of progress for the auxiliary.

Membership this year surpassed last years with this years total of 1866. Also Russell County and Covington County have organized auxiliaries. We welcome them and this gives us 34 auxiliaries representing 37 counties.

Our contributions to AMA-ERF this year amounted to \$26,308.25.

I hope you will read the printed report you will receive on the work of the Auxiliary this year. I think you will agree that we have been a good representative of you and of your profession. The report will certainly indicate to you that we have worked very hard for the auxiliary but more importantly, we have worked hard—together.

You and your spouse have been very kind this year by inviting me to county auxiliary meetings and to visit in so many homes. It has been an experience I will always treasure.

I want to thank Dr. Luther Hill, the Medical Association and the MASA Staff for a lot of help along the way this year.

Your comments about this page have been very kind and I thank you for that.

Dr. Hill was very gracious in recognizing the Auxiliary President at the Leadership Conference in January and at the Congressional Delegation Weekend in Washington.

It has been an exciting and rewarding year to serve as president of the auxiliary to your Medical Association.

A quote which I used last April now has added meaning to me. Wilfred T. Grenfell said: "Real joy comes not from ease or riches or from the praise of men, but from doing something worthwhile."

A handwritten signature in cursive script, appearing to read "Annie".



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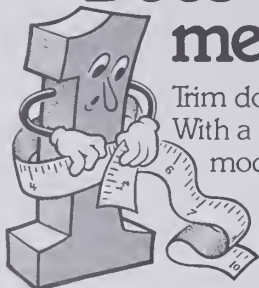
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# 7 ways to feel good and live longer

## Does your figure measure up?



Trim down your excess weight. With a sensible diet. And regular, moderate exercise.

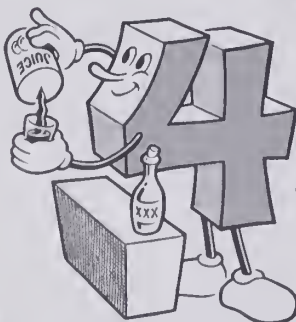
## What's for breakfast?

It's the most important meal of the day. Don't miss it.



## Do you work on balanced meals?

Your body needs three squares a day, balanced from the four food groups.



## Where do you draw the line?

If you drink, stop. Or at least cut back. Studies show that people

who don't drink or drink only in moderation live longer.



## Have you kicked the habit yet?

Smoking greatly increases your chances of cancer, heart disease and emphysema. Stop while you're ahead.

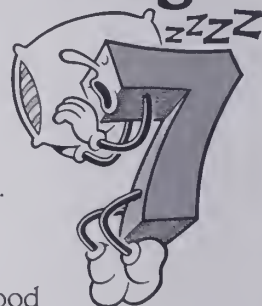


## Are you skipping exercise?

Don't. Moderate exercise about three times a week can make you feel better.

## Do you get enough shuteye?

Most people do need seven to eight hours a night. Give body and mind the rest they need.



Our coverage can take good care of you if you get sick. And that's a good feeling. But the healthier people are, the easier it will be to keep health care costs within reasonable bounds. For all of us.

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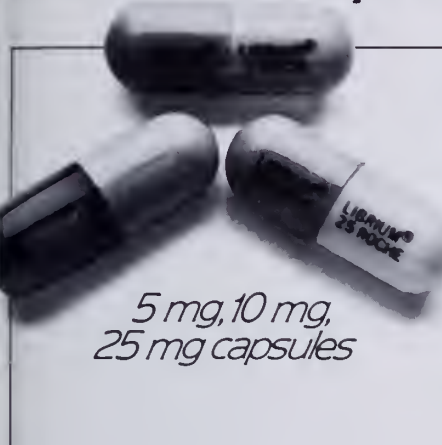


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- ☐ Proven antianxiety performance
- ☐ An unsurpassed safety record
- ☐ Predictable patient response
- ☐ Minimal effect on mental acuity at recommended doses
- ☐ Minimal interference with many primary medications, such as antacids, anticholinergics, diuretics, cardiac glycosides and antihypertensive agents

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and

acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—also infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Usual Daily Dosage:** Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

**Supplied:** Librium<sup>®</sup> (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose<sup>®</sup> packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs<sup>®</sup> (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

*synonymous  
with relief of anxiety*

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## The Big Sky and the Good Earth of Dr. Frierson



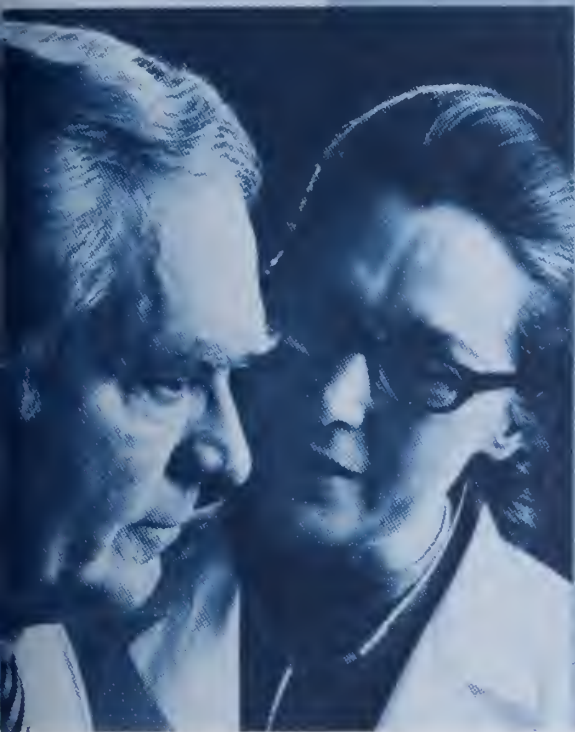


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ROCHE





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performance

***Librium***<sup>®</sup>  
*chlordiazepoxide HCl/Roche*



5mg, 10mg, 25mg capsules

***synonymous  
with relief  
of anxiety***

- ☐ An unsurpassed safety record
- ☐ Minimal effect on mental acuity, in proper dosage
- ☐ Predictable patient response
- ☐ Is used concomitantly with primary medications, such as anticholinergics and cardiovascular drugs

Please see next page for summary of product information.



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The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

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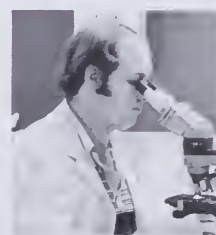


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# President's Message



Luther L. Hill, M.D.  
President

## Put It In Writing

Although a President's term of office ends by the calendar, in the process of cleaning off his desk, he finds some business he meant to attend to and didn't.

Dr. Lightcap has generously given me the use of this space for another month to write briefly about a subject I consider important—letters to the editor of the Journal.

Correspondence is the lifeblood of many old and famous journals. I need mention no more than *The New England Journal of Medicine* and *Lancet* and *JAMA* to make the point. Letters may be on virtually any subject bearing on medical practice.

In my discussions with other physicians during the past year, I have noticed many subjects, with some original thoughts that had not occurred to me, that would make excellent letters to the Journal. Usually when this is suggested, the physician says he doesn't have time and/or doesn't want to get involved in any controversy.

But controversy, divergent opinions between gentlemen, is the fundamental method by which medicine has advanced out of the dark ages.

And, barring some miracle, it will always be this way. Out of controversy comes knowledge. I urge to you to write down your ideas and send them in for publication. It will certainly make for a livelier Journal and a much more readable one.

*Luther Hill*





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# Perdiem™

## Prescribing Information

**ACTIONS:** Perdiem™, with its gentle action, does not produce disagreeable side effects. The vegetable mucilages of Perdiem™ soften the stool and provide pain-free evacuation of the bowel. Perdiem™ is effective as an aid to elimination for the hemorrhoid or fissure patient prior to and following surgery.

**COMPOSITION:** Natural vegetable derivatives. A unique blend of psyllium and senna (Plantago Hydrocolloid with Cassia Pod Concentrate).

**INDICATION:** For relief of constipation.

**PATIENT WARNING:** Should not be used in the presence of undiagnosed abdominal pain. Frequent or prolonged use without the direction of a physician is not recommended. Such use may lead to laxative dependence.

**DIRECTIONS FOR USE—ADULTS:** Before breakfast and after the evening meal, one to two rounded teaspoonfuls of Perdiem™ granules should be placed in the mouth and swallowed with a full glass of warm or cold beverage. Perdiem™ granules should not be chewed. After Perdiem™ takes effect (usually after 24 hours, but possibly not before 36-48 hours), reduce the morning and evening doses to one rounded teaspoonful. Subsequent doses should be adjusted after adequate laxation is obtained.

**IN OBSTINATE CASES:** Perdiem™ may be taken more frequently, up to two rounded teaspoonfuls every six hours.

**FOR PATIENTS HABITUATED TO STRONG PURGATIVES:** Two rounded teaspoonfuls of Perdiem™ in the morning and evening may be required along with half the usual dose of the purgative being used. The purgative should be discontinued as soon as possible and the dosage of Perdiem™ granules reduced when and if bowel tone shows lessened laxative dependence.

**FOR COLOSTOMY PATIENTS:** To ensure formed stools, give one to two rounded teaspoonfuls of Perdiem™ in the evening with warm liquid.

**DURING PREGNANCY:** Give one to two rounded teaspoonfuls each evening.

**FOR CLINICAL REGULATION:** For patients confined to bed, for those of inactive habits, and in the presence of cardiovascular disease where straining must be avoided, one rounded teaspoonful of Perdiem™ taken once or twice daily will provide regular bowel habits. Take with a full glass of water or beverage.

**FOR CHILDREN:** From age 7—11 years, give one rounded teaspoonful one to two times daily. From age 12 and older, give adult dosage.

**NOTE:** It is extremely important that Perdiem™ should be taken with a plentiful supply of liquid.

**HOW SUPPLIED:** Granules, 100 gram (3.5 oz) and 250 gram (8.8 oz) containers.

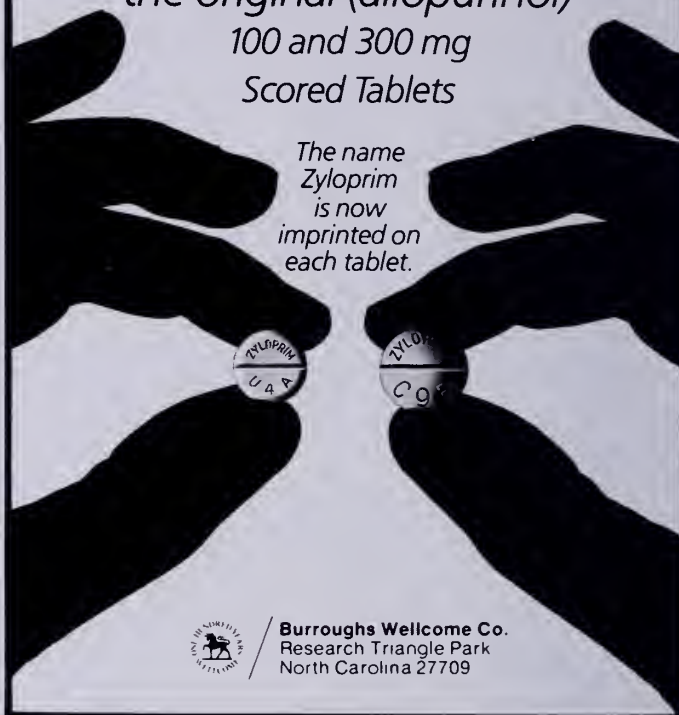


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*pep2*

The Physical Education Public Information (PEPI) Project is a public service campaign developed by AAHPER to inform Americans about the value and benefits of school physical education programs.

The creation of these public service advertisements was made possible through the generosity of the Gillette Company, Safety Razor Division. Selected photos courtesy of the 1975 Scholastic Kodak Photography Awards.

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# From the Executive Director

## Names Make the News

Recently, at one of our weekly staff meetings, the talk turned to the publications of MASA, principally *The Alabama M.D.* and the *Journal*. That happens frequently.

We have often discussed the content and format of the publications but have never been able to come up with any hard and fast conclusions because there seem to be as many opinions as there are MASA members, about 3,800.

Other publications have relied on readership surveys, but these are questionable at best. Extremists seem to distort the findings. That is to say, a sports nut will say that the magazine or newspaper under discussion should be virtually all sports. But another zealot might want more foreign policy analyses. And neither may want to read anything about state and local politics, or cooking, or any of the other staples in the bill of fare that any publication tries to achieve. And doctors are just as diverse in what they want from their publications.

The question then became:

"If you had to pick a common denominator of interests among our readers, what would it be?"

The argument droned on for some time, with almost all agreeing that while certain categories of information were obligatory—scientific articles, pertinent political happenings, etc.—it seemed that most physicians are *most* interested in what other physicians are doing, vocationally and avocationally.

This has been very evident, for instance, in the reunions at annual sessions. Doctors are interested in doctors. That seems simple enough, but there is nothing more obscure than the obvious sometimes.

To test this hypothesis, and for other purposes to be developed later, Bill McDonald has begun nosing around the state to feed this perceived appetite for stories about what doctors are doing with the small spare time left to them. In just two visits in a single week, in Elmore County and Madison County, he found (1) a

physician who is an expert farmer, carpenter, blacksmith and just about everything else you can imagine, and (2) another who has built, in his home, one of the craziest looking airplanes you ever saw. And it flies, getting 50 miles to the gallon. (See page 000.)

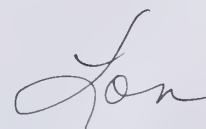
These reporting trips over the state will, we hope, lead to all kinds of spin-offs. Bill has a veteran journalist's ear cocked for opinions about MASA. Its perceived sins of omission and commission, if any, will be reported back to the central office. And they won't be roundfiled. They will be weighed and acted on.

His articles, the first of which appears in this issue, may tell something about the lifestyle of physicians you never heard of. Whether these stories have any lasting informational value or not is of less concern than their reader interest. Although 55,000 square miles of Alabama real estate is a lot of turf, we hope you will contact us about your stories, whether they make a point or not, whether the subject lives in the city or out beyond the blacktop. We are interested in everything, not just the offbeat, that helps us tell you what your busy colleagues are doing to keep the creative juices flowing after hours.

Is somebody out there writing the great American novel? We'd like to hear about it. Or does one of you have the vintner's secret to the finest wine produced outside the French chateaus? Let us know.

Most men, Thoreau said, live lives of quiet desperation. That may be true of *most* men, but our hypothesis embraces the notion that most physicians do not; that they are, by nature and by definition, uncommonly curious men and women, with boundless intellectual appetites that never seem to grow stale.

An it is that story that we would like to tell, although it will never be finished. Maybe someday these vignettes will find a place, if only as footnotes, in the history of 20th Century Alabama medicine.



S. Lon Conner



Dr. Frierson readies his canard design aircraft for flight.



A short distance from the hanger he tills his crop of vegetables, predicting a good year for the Frierson larder.

# The Big Sky and the Good Earth of Hazel Green, Ala.

By William H. McDonald

When Wallace B. Frierson, M.D., 51, was a boy back in Maury County, Tenn., he had two dreams—flying and medicine.

At age 17, he learned to fly at the Pleasant Hill airport. But he had to give that second love up for his first, medicine, until just a few years ago, when he bought the little Hazel Green, Ala., airport, lock, stock and barrel, because his wife, Pat, was learning to fly.

It took Dr. Wally Frierson and Pat 18 months and some 1,200 hours to build this radically designed fuel-efficient aircraft, which weighs only 640 pounds and gets 50 miles per gallon flying two people at 200 m.p.h. And they loved every minute of it.

Neighbors thought the Friersons had taken leave of their senses as what had started out as a garage project overflowed into the house. The living room was used for cutting yards and yards of fiber glass, the secret of its strength, the guest bedroom for storage of assembled components.

After earning his M.D. at the University of Tennessee, and with further training at the University of Oklahoma, Dr. Frierson settled down to a man-killing family practice in Shelbyville, Tennessee, where he tried to do everything himself—house calls to surgery.

## The Choice

At age 31, the overwork exacted its price—he had two heart attacks. His two children (one of whom has just earned her M.D. at Huntsville School of Primary Care) were young at the time. The thought of them growing up fatherless convinced young Dr. Frierson that he had to live for their sake.

He left private practice for industrial medicine, working first for AERO, Inc., (Arnold Engineering and Research Organization) in Tullahoma, Tennessee. In 1966, he answered the call of the National Aeronautics and Space Administration to be Medical Director of the Marshall Space Flight Center,

Huntsville, a job he kept five years. He left it in 1971 when the space program came to a screeching halt after the moon landings.

While there, Dr. Frierson did some advanced computerized studies of some 7,000 NASA personnel physicals, mainly scientists', on a subject literally close to his own heart—the risk factors in heart attack.

He went back into Family Practice in Huntsville nine years ago but has learned to turn major portions of his work load over to specialists and has tried to convince his daughter, Patty, 26, that she should do that when she starts practice in a couple of years. So far, Dr. Frierson says, he has not been able to persuade her of the wisdom of that.

Their other child, Beverly, 23, has her BS in Mechanical Engineering, and is working on advanced degrees in the suddenly very important field of thermal transfer at Oklahoma State University.

Her Master's project includes the study of three houses including the



same number of people with radically different heating systems, some futuristic.

The doctor daughter, Patty, first started out to be a nurse, following in her mother's footsteps rather than her father's, then decided it wouldn't take that much longer to get her M.D.

Last year, she trained at Charity Hospital, New Orleans, and will return to Huntsville to complete her Family Practice residency.

**Pale and Shaking**

Eleven years ago, Dr. Frierson became concerned that his wife, whom he had started going with in the 7th grade back in Tennessee, needed to avoid the depression that often occurs in the empty nest syndrome.

"I tried to interest her in about 20 different things, but nothing worked. Then one day, we went out to Hazel Green, where they had this little airport, used mainly as a drag strip . . ."

Mrs. Frierson was inveigled into going up for a short flight.

"When she got down she was pale and shaking," Dr. Frierson recalls, "and I was sure this would be another thing she would not be interested in."

Drawing closer to his wife, he heard her speak in a thin, almost inaudible voice: "When can I go up again?" She had decided she would solo at least.

That was in 1969. A year or so later, Dr. Frierson bought the little airport and Mrs. Frierson went on to win multi-engine and full instrument ratings.

(The author, remembering his navy flying days, can testify to her consummate skill, after flying with her recently.)

Dr. Frierson cannot get a powered aircraft license these days because of those heart attacks 20 years ago. He flies gliders instead, where no such medical requirement exists—presumably for the reason, as he put it sardonically, that somebody in Washington figured out that if a glider falls, it's so light it won't hurt anyone.

"Pat is the hot pilot in our family now. But I have a lot of fun in the Laister-Kaufman glider," he says.

The airstrip and taxi strip at Hazel Green have been transferred to a corporation of a dozen or more, with Dr. and Mrs. Frierson retaining sole ownership in their hangar (which proclaims the fact in large letters), and the acres where they have their garden along the runway. A commodious trailer is their weekend home. They can step right out of their planes and tend the crops.

**Why Experimental Aircraft?**

Viewing all this serenity, far removed from the madding crowd, you can understand it when Dr. Frierson boasts that he has not had a chest pain in years.

In the soft May twilight, Dr. Frierson kicked along the furrows of the newly planted crop and predicted it would be a good potato year, anywhere from 200 to 600 pounds, and a good year as well for his corn, strawberries, green onions, radishes, and all the rest of the pro-



**Dr. Frierson at peace with the world at the controls of his sail plane over the fields of Hazel Green.**

duce that oversupplies the Frierson freezer into the homes of friends every year.

His workaday world is still medicine:

"I have never cared for the country club patient that others have. I like to take care of people who work hard and want to stay well. My patients are from Huntsville, yes, but also from Shelbyville, Tenn., Gadsden and all over. And I take care of many of the people around Hazel Green."

### Small, Serene World

There in the soft glow of fading light, Dr. Frierson's world was bounded by Crosswind Road on one side and Approach Lane on the other. He had spent the day, or most of it, repainting the numbers on the runway. He and others in his congenial group were happily spattered with fresh paint.

"Life is simple and pleasant," Dr. Frierson said. Not a sound could be heard: no traffic, not even the hum of insects that would come later in the summer. Why then would such an obviously tranquil man set about building such a radical configuration of an airplane? Dr. Frierson:

"Pat, Al Berisford and I went to the Experimental Aircraft Association fly-in in Oshkosh (Wisconsin) in the summer of 1976.

"We saw the prototype of the plane, which had been designed by Bert Rutan, a former Edwards Air Force Base test pilot. I had built model planes since childhood and still fool around with radio controlled models. In fact, I have a J-3 (Taylorcraft) quarter-inch scale plane at home with a span of nine feet. This plane just looked like another big model to me and I figured we could build it."

It was almost a year, in March 1977, before the boxes of material began arriving at the Frierson home. There were 11 crates in all—quantities of epoxy cement, with which it is held together, bolts of fiber glass, the secret of its strength, and the styrofoam, which gives it form and shape.

### 1,200 Hours to Flight

With no welding or riveting to learn (there is none in the plane), the Friersons and Mr. Berisford, working when they could, had it ready for its maiden voyage in September 1978. It had taken them 18 months at odd times, perhaps 1,200 hours, to build it. But it flew—as it was supposed to and then some.

Faithful Al Berisford, a Rockwell International technician who has been flying most of his life, was the

*continued on page 17*

## Life in Hazel Green, Alabama

*If you stay on Huntsville's Memorial Parkway as it feathers out into Highway 231 North traversing some of the state's most verdant farmland, in no time at all you have passed through Meridianville, a small hamlet that does appear on the map.*

*But since your destination is not here, if you are seeking the weekend Valhalla of Wallace B. Frierson, M.D., as I was, keep going a few more minutes until a sign proclaims you are about to whisk through the little town of Hazel Green, Ala., which doesn't appear on any maps I could find.*

*At the town's only traffic signal, a meaninglessly flashing yellow signal, you turn West, as instructed, off 231 and begin your search for the airport, which Dr. Frierson bought a decade ago, having been forewarned that if you get lost you are in trouble. Some of the residents don't know just where the small, single-runway airport is, though most have heard talk of the fools and their flying machines. Tennessee is just a few miles up the pike.*

*Down East Limestone road, a typical country lane, about three miles or so, you deadend on Murphy Hill Road, then two country blocks, more or less, to Opt Reynolds Road, down it a piece to the*

*airport, which is easy to miss, nestled in a wooded area abounding in century-old oaks and other hardwoods.*

*You drive up to the operations shack, an unimposing structure of perhaps 10 by 20 feet, and you know you have arrived.*

*A wind direction indicator tops the building, with its anemometer spinning to the brisk spring wind. Nobody seems to pay it much mind, or the red windsock by the runway either. A vintage Luscombe is shooting lazy touch-and-go landings, cheerfully oblivious to the wind sock, which shows the pilot to be landing downwind, the classic no-no since Wilbur and Orville started it all when the century was three years old at Kitty Hawk.*

*But then, with but one runway, the Hazel Green pilots have to accommodate to all kinds of winds. So maybe its not all that unusual, although the Luscombe lands rather jumpily as if it, at least, still respects the aeronautical verities.*

*One of the small group rears back in his chair against the operations shack (there is no tower) rises easily, his baseball cap perched atop a greying red head, and advances to greet the visitor.*

*"I'm Wally Frierson. Welcome to Hazel Green."*

*It's hospitality like that that has convinced more than one transient pilot that the little Hazel Green airport, which looks like a match stick from the air, nestled in its green surroundings, is a nice place to drop in on when you're headed south.*

*For example, there were the man and wife flying into Huntsville from Vancouver, British Columbia, a year or so back, in the foulest of foul weather. They had decided to put in at Huntsville's jetport and were making their instrument approach when they told the Huntsville tower, which was talking them in through the miserable weather, that they saw a better deal down below, requesting permission to break off the approach.*

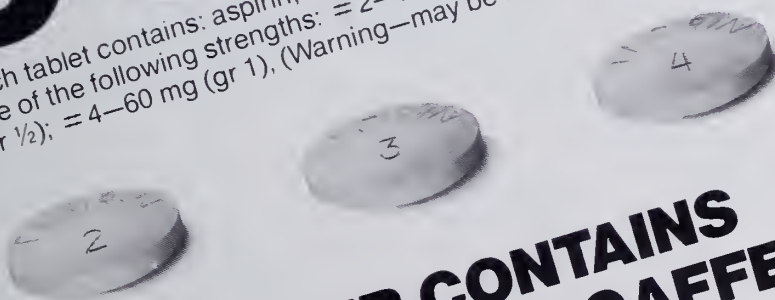
*When they landed, they were greeted by Dr. Frierson and his wife, Pat, who put them up for the weekend until the weather cleared. Their weekend trailer is parked just down the runway in a grove of giant oaks, where a larger farm house once stood. The Canadians still write often, thanking the Friersons for that port in a storm.*

*Wally Frierson, M.D., and Pat Frierson, R.N., are like that—warm, friendly, engaging people who have found the good life, although Dr. Frierson's busy Huntsville practice doesn't allow as much time there as he would like.*



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Each tablet contains: aspirin, 325 mg; plus codeine phosphate in one of the following strengths: = 2-15 mg (gr 1/4); = 3-30 mg (gr 1/2); = 4-60 mg (gr 1), (Warning—may be habit-forming)



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A woman with dark hair tied back, wearing a white chef's coat, is focused on her work in a kitchen. She is leaning over a large, dark, rectangular tray filled with rows of golden-brown, elongated food items, possibly fried fish or vegetables. The background is dark and out of focus, emphasizing the chef and her work. The text "getting back to business" is overlaid in a bold, white, sans-serif font on the right side of the image.

**getting back  
to business**



# with symptomatic relief of moderate anxiety with depression

## **Rapid relief of anxiety**

The tranquilizer component alleviates symptoms of anxiety within a few days without apparent dulling of mental acuity. Hypnotic effects appear to be minimal, particularly in patients permitted to remain active. However, TRIAVIL may impair mental and/or physical abilities required for the performance of hazardous tasks.

## **Dependable antidepressant action**

The antidepressant component relieves symptoms of depression such as poor concentration and feelings of hopelessness as well as early morning awakening; adequate relief of symptoms may take a few weeks or even longer.

**for moderate anxiety  
with depression**

**dual-action**  
**Triavil**®

**containing perphenazine and amitriptyline HCl**

## **Treatment with TRIAVIL— a balanced view**

TRIAVIL is contraindicated in CNS depression from drugs, in the presence of evidence of bone marrow depression, and in patients hypersensitive to phenothiazines or amitriptyline. It should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. TRIAVIL may enhance the response to alcohol. Antiemetic effects may obscure toxicity due to overdosage of other drugs or mask other disorders. The possibility of suicide in depressed patients remains until significant remission occurs. Such patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

**MSD**  
MERCK  
SHARP  
DOHME

*Please see the following page  
for a brief summary  
of prescribing information.*

by providing symptomatic relief  
of moderate anxiety with depression

# Dual-action<sup>®</sup> Triavil

containing perphenazine and amitriptyline HCl

helps patients get back to business

## Available:

TRIAVIL<sup>®</sup> 2-25: Each tablet contains  
2 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL<sup>®</sup> 2-10: Each tablet contains  
2 mg perphenazine and 10 mg amitriptyline HCl.  
TRIAVIL<sup>®</sup> 4-50: Each tablet contains  
4 mg perphenazine and 50 mg amitriptyline HCl.  
TRIAVIL<sup>®</sup> 4-25: Each tablet contains  
4 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL<sup>®</sup> 4-10: Each tablet contains  
4 mg perphenazine and 10 mg amitriptyline HCl.

**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdose. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorus insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary neoplasia from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amidation:** In manic-depressive psychosis, depressed patients may experience a manic phase and the manic phase if they are treated with an antidepressant. Patients with manic phase symptomatology may have an exaggeration of such symptoms. The sedating effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent alone. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states, disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress; vomiting, anorexia; stomatitis; peculiar taste; diarrhea, parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

**OVERDOSAGE:** All patients suspected of having taken an overdose should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdose with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

J9TR33 (DC6613215)

For more detailed information, consult your MSD Representative or see full Prescribing Information, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

**MSD**  
**MERCK**  
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**DOHME**



*Continued from page 12*

test pilot. (He has worked on the Space Shuttle and other projects.) A veteran pilot, it was his first test in a craft that had been, literally, glued together.

When the VariEze was put through its paces for my benefit recently, I was most impressed by the climbing turn that Berisford made at the very end, showing off its unbelievable rate of climb. After a few minutes of picture taking at 2,000 feet over the blue hills and lush green fields of northern Alabama, when he held the odd craft close to our Cessna 210 flown by Mrs. Frierson, he nosed it over for the Hazel Green strip below and behind us.

When Mrs. Frierson wheeled the Cessna around for a better look, we were able to see the VariEze point skyward over the far end of the runway, zoom almost vertically in a climbing turn with a 180-degree change of direction. (When, back on the ground, I complimented Mr. Berisford on his beautiful "chandelle," he replied with a puckish grin: "Aw, that's just the way I turn.")

### A House Divided

Whatever misgivings Mr. Berisford had about flying the home-made plane have long since vanished. He loves it, as does Mrs. Frierson who waited until he had finished the testing back in September and October 1978 before her first solo in it Nov. 15, 1978. Even then, she opted for the longer runway at Fayetteville, Tenn., up the road a piece.

The building of it had begun in the garage, but one thing led to another and eventually most of the house was commandeered for various purposes: the living room for cutting the large pieces of fiber glass, guest bedroom for temporary storage of parts, and so on. The Frierson neighbors were persuaded that an otherwise nice family had gone completely daft. Dr. Frierson's physician friends had much the same comment: "Surely you're not going to fly something **YOU** built, are you?"



**Planning the rendezvous at which the air-to-air pictures of the VariEze were taken. Dr. Frierson points as the VariEze pilot, Al Berisford, and MASA's pilot, Mrs. Frierson, look on.**

### Endurance Champ

A stretched version of VariEze has just beaten the world's light-plane endurance record (33½ hours over 4,900 miles) and an even longer flight is planned, Seattle to London and return, non-stop. Additionally, Rutan has designed a push-pull plane, the Defiant, with one engine in front and another behind, to carry six passengers. It is said to have struck fear in the hearts of the industry because of its low cost, having eliminated the welding and riveting of conventional air-frame assembly.

The engine for the Frierson VariEze was pulled from an old Cessna, the carcass of which is now in their ancient barn. Except for the mechanic employed to rebuild the engine, no other outside work was necessary.

"We learned to use hot wire to cut foam cores," Dr. Frierson says, "learned to cut and shape metal, learned to do things over when we did them wrong. And we learned one cardinal principle: Look at everything three times, measure it at least twice and cut it once."

One of their biggest problems was in mixing epoxy, which has to be done at a temperature above 68 degrees F. Their garage got much colder than that in the winter

months, and gluing had to be abandoned for other work during that time of year.

A major problem through the years in aircraft design has been that of tip vortex, the swirling eddies formed where the wing ends. This miniature tornado creates severe drag problems. This plane was the first to use the Whitcombe winglet, the almost vertical stabilizers at the end of the wings, with the smaller subwinglets beneath. These cut drag by 8 to 12%, which is why all the newer jets have them.

Winglets are shaped like the sail of a boat and have much the same effect, the Bernoulli effect, that pushes the boat forward. For practical purposes, the winglets add 8 to 12% to the power.

Despite its unconventional construction, VariEze is a very strong airplane, stressed for plus or minus nine times the force of gravity. The Frierson's Cessna, by contrast, is stressed for only 4 plus and 1½ minus Gs.

### Pat Does It All

Today Dr. Frierson, who fell in love with powered planes, can only fly gliders because of his cardiac history, but Pat can and does fly almost anything. If that's discrimination, a short visit with a very happy family is enough to demonstrate that he has made the most of it.

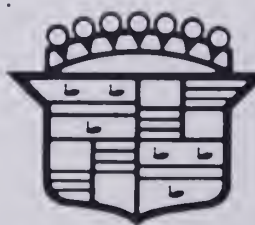


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# Auxiliary 1980-81 Inaugural Address

Mrs. O. B. Carr, Jr.  
President, AMASA

## Progress

As the Auxiliary to the Medical Association of the State of Alabama begins a new decade of service, I think it is a good time for each of us to reassess our priorities and activities, a time for reaffirming our objectives and examining our goals for the future.

I believe in order to know where you are going, you must first appreciate where you've been. To a greater or lesser degree, everything we do, whether it's some routine everyday task or making some great discovery, depends for its success on what was done by someone else. And so it has been with our Auxiliary.

An auxiliary to the American Medical Association was organized in 1922 as the logical outgrowth of state and county auxiliaries already in Texas, South Dakota, Oklahoma, Maine, Minnesota and Montana.

On April 29, 1923, in Mobile, the Women's Auxiliary to the Medical Association of the State of Alabama was organized, having previously been endorsed by the House of Delegates. The organizing chairman and unanimously elected first president was Mrs. Seale Harris of Birmingham. Twenty-three physicians' wives were present.

Today I am the 53rd president to be installed. The state auxiliary has been a component part of the National Auxiliary for the past 57 years and has actively supported the national program. Leadership in this organization has been exceptional.

Many of our state presidents have been tapped for national level committees and officers. We have had four past state presidents to serve as national president: Our founder, Mrs. Seale Harris, Mrs. John M. Chenault, Mrs. William G. Thuss, Sr., and today we are very proud of Mrs. Ben Johnson, Jr., as our A.M.A. Auxiliary President for 1979-1980.

The history of the auxiliary has been one of steady growth. Thousands of dollars have been raised for the A.M.A. Education and Research Foundation, and many health related community projects have been accomplished. While the auxiliary takes pride in the accomplishments of its leaders, even more important to the state auxiliary and the A.M.A. Auxiliary, is the loyal support of each individual county member, who has worked by the side of their spouse to secure the best in health and welfare for their own community.

You know Christ said, "You did not choose me, I chose you" and so it is, through love between you and your spouse you were chosen to be a part of the medical family. And through this love, we have the privilege of being close to our mates as they work for better health care. And through this closeness, we are made aware of the health problems in our communities.

Our privileges demand that we share ourselves, our caring our experiences and our time. This sharing calls for organizing our personal priorities in order that our special talents and energies are used where they are most needed. Through community-action programs medical auxiliary members have contributed to quality health care for people all over the country. As times change, the medical auxiliary perfects programs for today's needs, meets crisis with concern, and through efforts of its members, makes the difference on issues that matter most to the future of quality health care for the betterment of each community.

## Proud Heritage

Truly we are proud of our heritage, but the future of this organization lies before us. You are the future

of this auxiliary. The history of this decade has already begun to be written. We as leaders and members of this organization have a marvelous opportunity in the 1980s to continue to advance the cause of preventive medicine, to continue to work for and secure adequate medical legislation, to promote good fellowship among physicians' families and to assist the Medical Association of the State of Alabama.

These are the values our auxiliary holds dear, for these are the objectives of this organization set forth in our bylaws. As a member of this auxiliary we have pledged our support to the objectives of this organization and those of the American Medical Association Auxiliary, their purposes and ideals. But in a larger sense, we also are saying that we believe in the concept of voluntarism, in the impact you and I as volunteers can make in our communities. This auxiliary has sustained the high ideals set by our founders, which will enable us to continue to be a great organization which effects meaningful change for healthier living.

## Future Goals

Now that we have reassessed our priorities and activities, and reaffirmed our objectives, let us examine our goals for future growth not only as an organization, but our personal growth as well. In order to accomplish anything in our lives I believe you must first have a goal, an obtainable goal with a workable plan for reaching that goal.

What are your personal objectives or goals for the coming decade, or better yet, for the next five years of your life. I believe with the privileges of being comes the responsibility of self-discipline. Self-discipline is doing what you know you should do, when you know you should do it, whether you like it or

not. Are you "Shaping up for life?" If you are not, maybe you should be.

William S. Ogdon said<sup>1</sup> "No one is happy unless he is reasonably well satisfied with himself, so that the quest for tranquility must of necessity begin with self-examination."<sup>2</sup> If you've ever watched a track meet, you know how the runners get down in a crouching position and get on their marks, all set to push off, and then at the sound of the starting gun, away they go. Well, you know, for you and me, we're not still crouched on the mark or at least we shouldn't be, because for us the gun has already gone off. Many of us act as if we wonder when life is going to begin, and we keep waiting while it passes us by.

Today, right now, this minute is our life. The gun has gone off, and whether we realize it or not, we're on our way around the track. If we think we're delaying our real living until some future time when all our problems will be solved, then we're kidding ourselves. This can never happen. We no sooner get one problem solved than things come unstuck

some place else. If you're waiting for some magic day when you have each problem nailed down and tagged, then you'll always be waiting. Today is the day to look around you and decide to start living.

Emerson said: "Every hour has its morning, noon and night." And we can take the morning of the very next hour and do with that hour something we can remember the rest of our lives. There is only one effective way to get ready for tomorrow, and that is by doing something today.

### The Road Ahead

Today we have reassessed our priorities, reaffirmed our objectives and examined our goals for the future. We know where we are going, because we appreciate where we have been. Much has been done, we have come far, and we have far to go—together. So today, let's make our plans, set our goals and get ready to meet the challenges of tomorrow. Through active support for membership to help continue auxiliary work, encouraging volun-

teer participation in activities which meet health needs, continuing to promote health education and efforts to raise funds for AMAERF, supporting the practice of medicine by responding to legislative health care issues, and thus improving the health and quality of life for all people.

Albert Schweitzer said, "I don't know what your destiny will be, but one thing I know—the only ones among you who will be really happy are those who have sought and found how to serve." This year, "Be all you can be," but above all, resolve to be happy through your work in the medical auxiliary. True happiness is the gifts of ourselves, which we give to others.

Mary

#### References

<sup>1</sup>Hay, Gilbert: "Happiness Is", An Essandess Special Edition, U.S.A.

<sup>2</sup>Boswell, Nelson: "Successful Living Day by Day", The Macmillan Company, New York, New York.

President-Elect—Mrs. Rufus Lee; First Vice-President, Mrs. Robert Estock; District Vice-Presidents NW—Mrs. Robert Rhyne; NE—Mrs. Andrew Brown; SW—Mrs. John Taylor; SE—Mrs. William Lazenby; Recording Secretary—Mrs. Ralph Braund; Treasurer—Mrs. Lamar Thomas.

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**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium<sup>®</sup> (chlordiazepoxide HCl/Roche) to known addic-

tion-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

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As with all anticholinergics, inhibition of lactation may occur.

**Precautions:** In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug

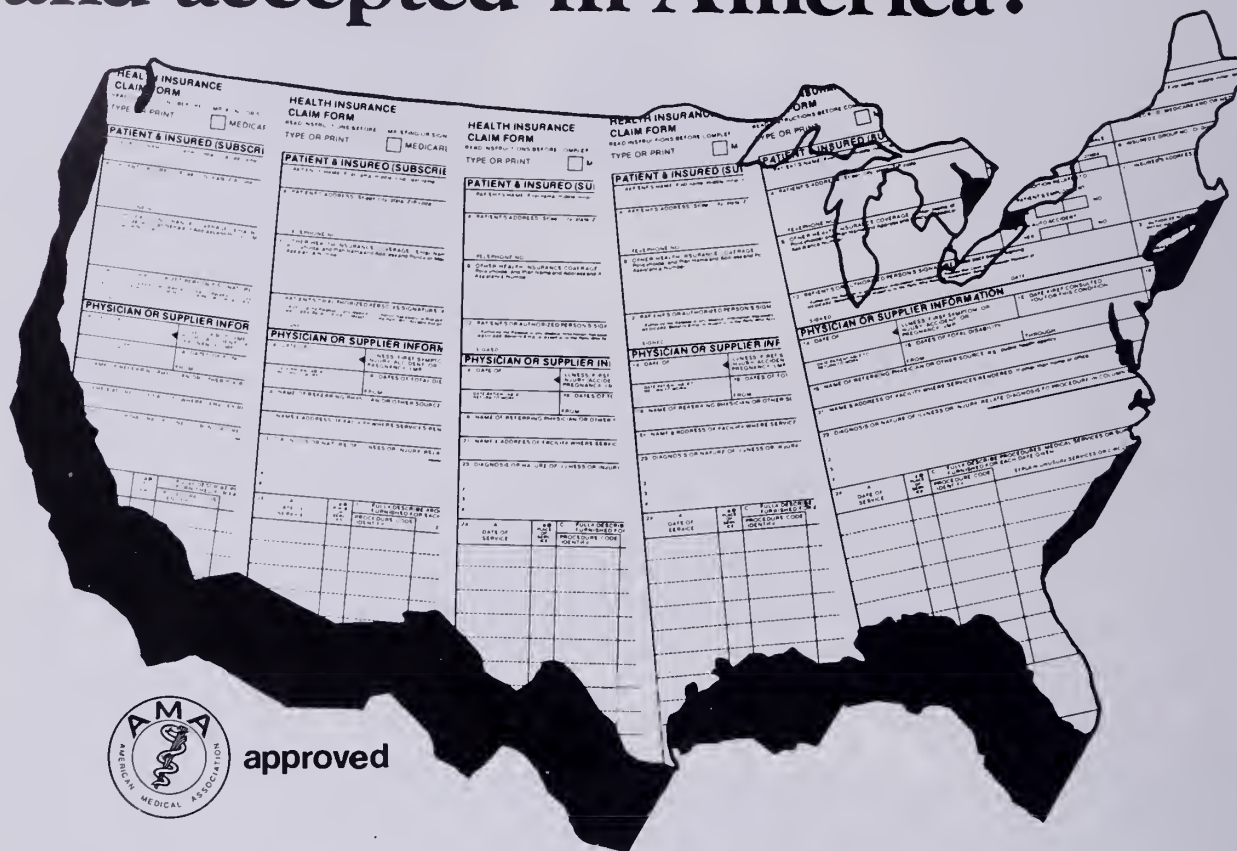
and oral anticoagulants; causal relationship not established.

**Adverse Reactions:** No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl; also periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typically of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other solid foods and/or low residue diets.

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# Wise Use of Blood Components Expands Supply

The blood problem in Alabama is like most things in life, basically one of supply and demand.

The Red Cross Regional Blood Service, Birmingham, provides blood and blood products for upwards of 3.5 million Alabamians in 56 counties.

Demand varies as does supply; and they are dealing with a precious and perishable product.

On an average day, the 125 hospitals serviced within the area require 700 units of blood for hospitalized patients. The hospitals depend on the Regional Blood Service to provide healthy and wholesome blood in the right components and quantities, all in the most economical way.

And that is no small order, as Eoline I. McGowan, M.D., Regional Blood Service Medical Director, told MASA in a recent tour of the complex facility.

Suffice it to say that it is an incredibly detailed and sophisticated procedure for assuring physicians they will have the blood and blood components they need, where and when they need them, for their patients.

It is incumbent on them to use only the components they need. Too often physicians order whole blood out of habit, when, according to the book:

"Whole blood is indicated only for those patients who have a symptomatic deficit in oxygen-carrying capacity combined with hypovolemia of sufficient degree to be associated with shock."

If only the former is present, the book continues, Red Blood Cells

(Human) is the component of choice.

Whole blood can be used for exchange transfusion and replacement of coagulation factors. However, in the absence of volume loss, coagulation proteins should be replaced by specific components or concentrates. Whole blood intended to replace labile coagulation factors (V, VIII, platelets) should be less than 24 hours old.

And the book (*Circular of Information for the use of Human Blood and Blood Components by Physicians, American Red Cross and American Association of Blood Banks*), concludes with a statement that is often

ignored, making the blood supply problem much more difficult:

"Limiting the use of whole blood to these specific indications, for example, massive or exchange transfusion, makes it possible to prepare several components from most donor units and thus to maximize the use of the blood resource."

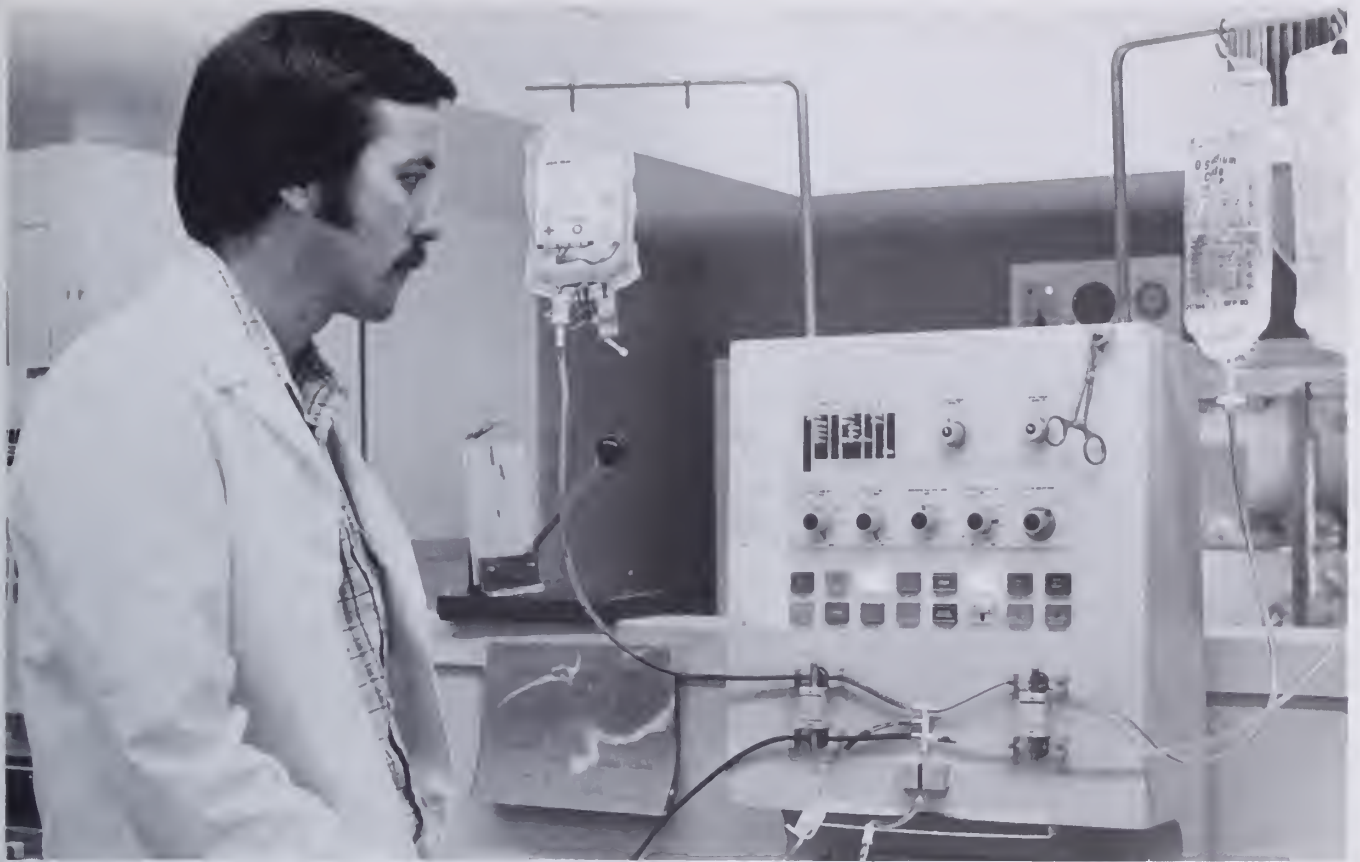
In other words, blood will go much further if used wisely and economically, with a cautious eye toward conservation of so important a resource.

Photographs on this page illustrate some of the reasons Alabama physicians and their patients are fortunate to have an efficient regional system.

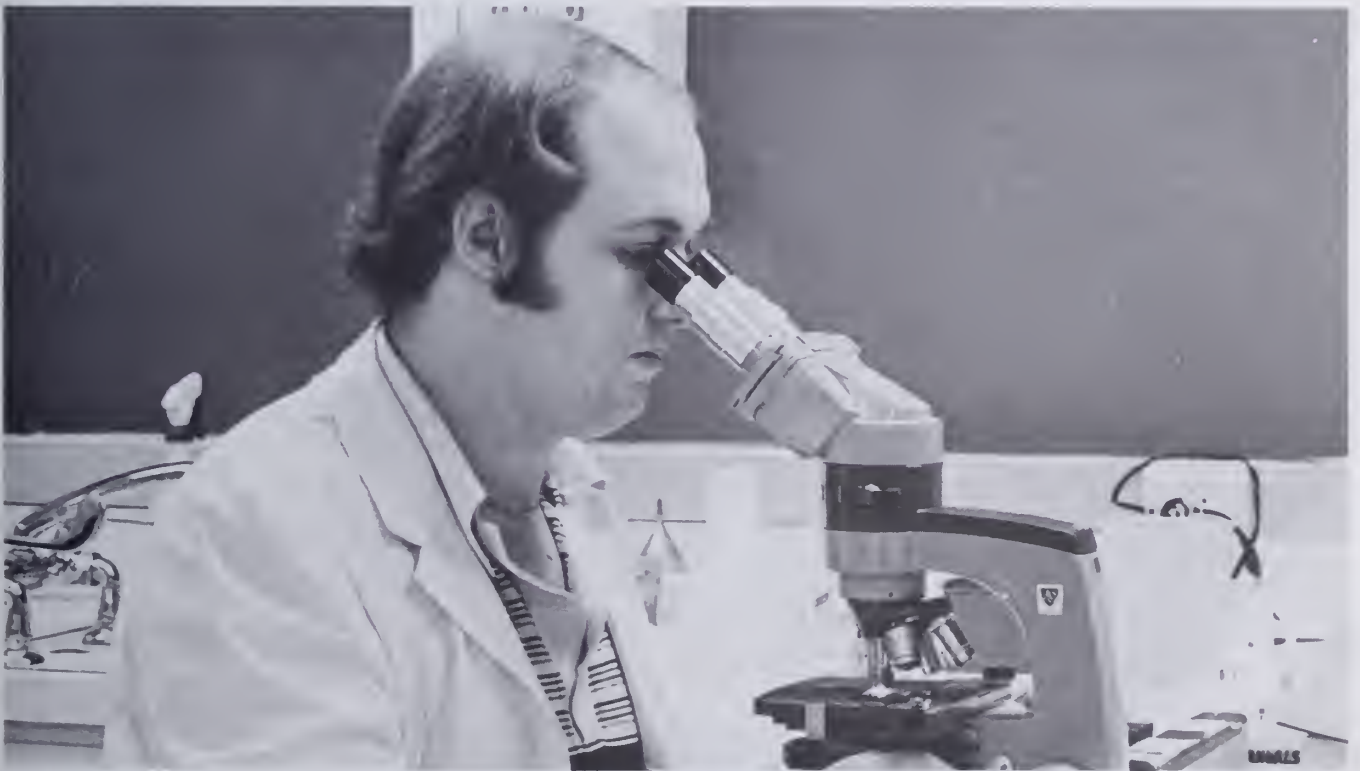


**Medical Director Eoline I. McGowan, M.D., who knows her subject thoroughly, runs a taut ship at the Regional Blood Service.**





**This ingenious machine by IBM tends the washing and preparing of red blood cells.**



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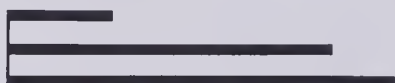
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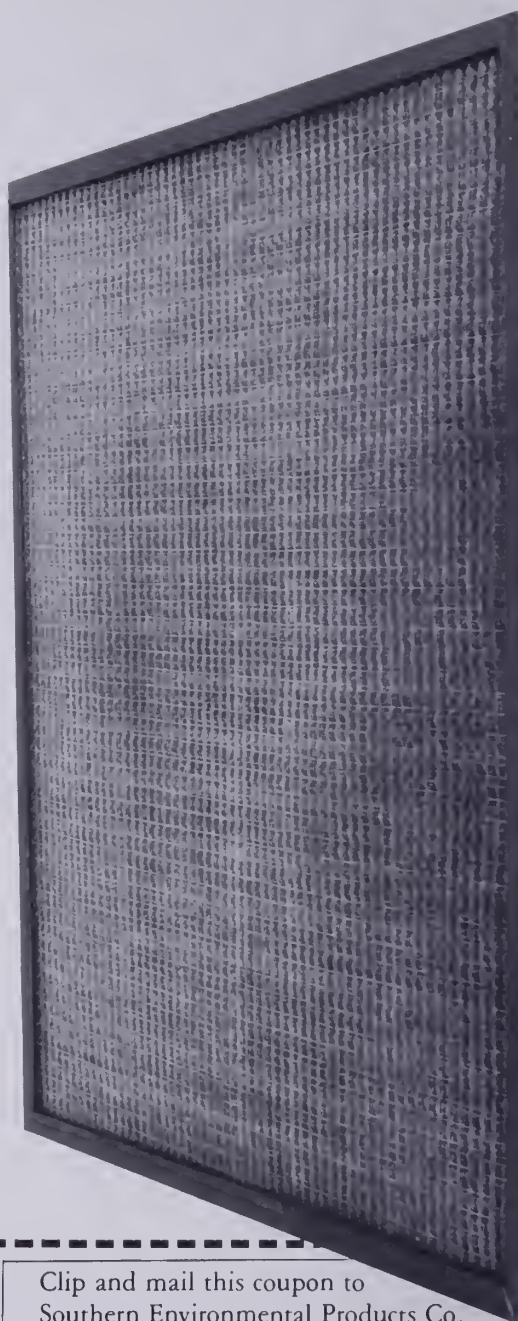
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# THE SOFT TISSUE INFECTIONS—A REVIEW

BY

T. NAGENDRAN, M.B., B.S., R.R.C.S. (C), F.I.C.S., F.A.C.S.\*

Because of space limitations, illustrations had to be excluded during make-up—Ed.

## The Soft Tissue Infections—A Review

A variety of soft tissue infections may complicate traumatic wounds, various bites and surgical wounds. Successful management of many of these infections is dependent upon early diagnosis, primarily recognizing the characteristic clinical manifestations of these various soft tissue infections and intervene them surgically.<sup>1</sup>

## HISTORICAL BACKGROUND

**Wound Care:** While Galen believed in application of something to the wound in order to speed healing, it was Hippocrates who pointed out that deterrents to wound healing need surgical treatment. Amoroise Pare discontinued the use of boiling oil in the wound management and proved that the wounds heal more promptly without it. Botallo showed that poisoning secondary to gunshot wound was due to contused tissue, loose fragment, blood clot and foreign bodies. In 1700, Desault introduced debridement as an operative procedure to remove the foreign body and dead tissue. Orr<sup>2</sup> was first to introduce irrigations and frequent dressing changes in this country. During World War II, Churchill,<sup>3</sup> Hampton,<sup>4</sup> and others introduced delayed primary closure. They showed it is far more preferable to accept healing by secondary intention than it is to primarily close the wound and develop a subsequent breakdown.

**Soft Tissue Infections:** In 1891, Dr. Joseph Jones, a Confederate Army surgeon, wrote on hospital gangrene and stated, "Skin of the affected parts turn green, blue, gray, black and virtually melted away."<sup>5</sup> The official records show that there were 2,642 cases during the Civil War of which 1142 (46%) proved fatal. In 1918, Pfannel showed that necrotizing erysipelas was caused by beta hemolytic streptococcus. Cullen<sup>6</sup> described a case of a synergistic bacterial wound infection following drainage of an abdominal abscess, apparently appendiceal in origin, but his case study lacked bacteriological support. In 1924, Meleney<sup>7,8,9,10</sup> reported 20 cases of streptococcal gangrene from China and then, again, in 1929, seven cases from this country. Meleney clearly pointed out that the pathology in this condition was subcutaneous necrosis and this was further confirmed by McCafferty and Leons<sup>11</sup> in 1948. In 1951, Wilson<sup>12</sup> further delineated this fatal soft tissue infection. In 1972, Baxter<sup>1</sup> described a new classification and summarized the current management of these infections.

**The Classifications:** The literature in this regard is confusing and the majority of classifications are either based upon the type of organisms involved or in the naming of the entities. Baxter classified these lesions under three major headings: 1. Lesions requiring incision and drainage; 2. Lesions requiring excision of tissues; and, 3. Cases not requiring extensive

surgical intervention but presenting problems in separation from the other surgical infections. Under Group 1, Acute Streptococcal Hemolytic Gangrene, necrotizing fasciitis, Streptococcal Myositis, Clostridial Cellulitis, gram negative anaerobic cutaneous gangrene and Staphylococcal Myositis are included. Under the second group, progressive synergistic bacterial gangrene, non-clostridial gas producing infections, non-clostridial myositis, human bite infections, and clostridial gas gangrene are included. The third heading involves erysipelas, lymphangitis, lymphadenitis, sporotrichosis and purpura fulminans. The differentiation between acute streptococcal hemolytic gangrene and necrotizing fasciitis is less important and many believe that these two conditions may be the same but in different stages of the disease process.

## I. SURGICAL INFECTIONS REQUIRING INCISION AND DRAINAGE

### A. Acute Streptococcal Hemolytic Gangrene (Case #1<sup>8,12,13,14,15,16,17,18</sup>);

This condition has also been called necrotizing cellulitis. The organism causing this kind of infection is a variety of strands of hemolytic streptococci. This condition usually occurs following minor trauma such as puncture wounds, abrasion or insect bites. It rarely occurs following an operative procedure. The systemic response is less alarming than erysipelas even though a temperature of 100 to 102 degrees and tachycardia may be present.

**LOCAL FINDINGS:** The affected skin is hot, red, edematous and often painful. The skin assumes a dusky hue with formation of blebs which contain dark serous material. Subsequently, cutaneous gangrene will appear. The exact mechanism for skin gangrene is not known. Meleney<sup>7</sup> believes that it may be due to a hyperallergic phenomenon, whereas McCafferty<sup>11</sup> postulated that a proteolytic enzyme factor was responsible.

The treatment involves emergency drainage with a longitudinal incision, thereby releasing the skin tension and decreasing the ischemia. The incision should extend beyond the obviously involved gangrenous edematous areas. After incision and drainage, the wound is treated by rest, elevation and moist dressings which are frequently changed to aid in mechanical debridement. The antibiotic of choice is Penicillin. Fluid losses into the wound should be replaced with balanced salt solution.

### B. Necrotizing Fasciitis (Case #2<sup>12,19,20,21,22,23,24,25,26,27</sup>);

Rapidly spreading necrosis of the superficial fascia is the most common of the surgical infections.<sup>1</sup> This type of infection complicates either traumatic or surgical wounds. Of the operating wound infections, the majority occur when an ab-

\*Chief, Surgical Service, Veterans Administration Medical Center, Tuskegee, Alabama and Clinical Assistant Professor, Department of Surgery, Meharry School of Medicine, Nashville, Tennessee.

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*John H. Magill, Executive Director. Layton McCurdy, M.D., Medical Director. Phone 803-559-2461.*



dominal hollow viscus has been entered. In either case, the highest incidence of these infections is seen in patients with ischemic small vessel disease such as diabetes. Also, this disease is more common in obese individuals. The streptococci are prominent among the bacteria producing fascial necrosis. Approximately 30% of these patients can develop skin changes very similar to hemolytic streptococci gangrene. Meleney in his own series reported streptococcus as the primary causative agent, while Wilson<sup>12</sup> reported a preponderance of hemolytic staphylococci as the primary agent. Mead<sup>19</sup> emphasized the presence of gram negative organisms once thought to be contaminant in addition to the presence of one of the gram positive cocci. Wyrick and Rea<sup>21</sup> reported an incidence of mixed cultures in 68% of 44 cases and expressed the belief that inadequate culture procedures limited the documentation of the synergistic nature of this infection. In any event, the available data suggest that necrotizing fasciitis is a synergistic bacterial surgical infection produced in most instances by a combination of gram positive cocci and gram negative rod. The gram positive cocci may be streptococci, either aerobic or facultative anaerobic or staphylococci in association with most frequently a pseudomonas, proteus or Enterobacter Aerogenes group organisms. The clinical signs include fascial dissection, hypoesthesia about the wound of origin with minimal local pain and severe systemic toxicity of rather sudden onset.

**POSTOPERATIVE MANAGEMENT:** Once these incisions have been performed, the wound should be left open and packed loosely with fine mesh gauze. Continuous antibiotic solution irrigation may be used. The fine mesh gauze should be changed frequently during the first few days after the surgical procedure. The dressing changes aid in the debridement of the wound, but more importantly permitting examination of the wound edges for additional dissection of the fascia which is likely to occur and demand additional operative intervention.

The heterograft and meshed split thickness skin graft are advantageous in promoting the wound healing further.

#### C. *Streptococcal Myositis*:<sup>1</sup>

The causative organisms are anaerobic streptococci. This form of infection progresses more severely than other streptococcal infection. Signs and symptoms include severe local pain, generalized toxemia, discoloration and edema of skin. Crepitation of the muscle, foul odor and occasional gangrene of the overlying skin.

Management includes incision and drainage of the abscesses, fasciitis and infected muscle groups. Severely damaged and necrotic muscles may need excision. Other supportive care and antibiotic management are same as any other streptococcal infection.

#### D. *Clostridial Cellulitis*:<sup>28,29,30,31,32,33</sup>

Crepitant or non-crepitant necrotizing cellulitis may be produced by clostridial organisms. Local pain precedes the appearance of small flat fragile blebs, exuding reddish brown musky foul smelling fluid. Frank necrosis of skin and underlying subcutaneous tissues may result if untreated. Systemic signs include tachycardia out of proportion to fever and toxic psychosis. Management is to make extensive incision and drainage and excision of blebs.

#### E. *Gram Negative Anaerobic Cutaneous Gangrene*:<sup>1,34,40</sup>

These cases are often confused with necrotizing fasciitis.<sup>27</sup> Large areas of bluish-gray necrosis in skin separated by areas

of normal skin form the unique character of this infection. Fluids from these lesions have been described as dish water underneath the skin lesion. Confluent liquefaction necrosis exists in fascio-muscle tissue. Systemic manifestations appear somewhat late in the clinical course. These include tachycardia, fever, disorientation and hemolysis. Surgical management includes incision and drainage, and debridement of necrotic tissues.

#### F. *Staphylococcal Pyomyositis*:<sup>35</sup>

Local muscle damage predisposes this infection. A primary type of pyomyositis have been reported primarily from oriental countries. Staphylococcus aureus are the usual offending organisms. Local muscle pain, due to myositis and subsequent abscess formation, are pertinent clinical features. Appropriate antibiotics in early stages of cases and incision and drainage in cases with abscess are highly successful.

### II. *SURGICAL INFECTIONS REQUIRING EXCISION OF TISSUE*

Except the clostridial infections, the surgical infections requiring excision of tissues are generally less prevalent. They are progressive bacterial synergistic gangrene, non-clostridial myositis and human bite infections.

#### A. *Progressive Bacterial Synergistic Gangrene (Case #4)*:<sup>10</sup>

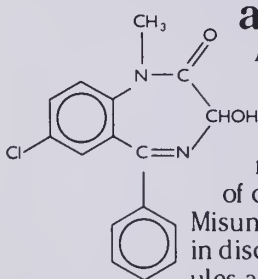
This infection is caused by microaerophilic, non-hemolytic streptococcus and staphylococcus aureus or a gram negative rod, most often Proteus species. This condition is also known as postoperative progressive synergistic gangrene and Meleney's synergistic gangrene. This type of infection usually occurs as a complication in the operating management of purulent infections of the peritoneal or pleural cavities or in association with traumatic wounds. The infection is a result of synergism between the two distinctive bacterial species with greatly different oxygen requirements. The skin and the subcutaneous tissue are primarily involved and often exclusively involved. The gangrene of the muscle and fascia develops secondarily. The infection is typically recognized at two weeks following the wounding. The skin surrounding the wound becomes edematous, red and usually tender. With progression, a characteristic lesion results that is demarcated into three zones. A peripheral wide area of a field of red cellulitis presents around a zone of purplish tender skin. The central zone becomes necrotic and will eventually ulcerate. The central ulceration results in undermining of the skin edges of the circumscribed lesion. Systemic manifestations include a low-grade fever, muscle wasting and profound anemia. Treatment involves culturing of the blood and wound, obtaining immediate gram stain examination, correction of the fluid and the electrolyte deficiency, correction of the anemia, central venous pressure monitoring, and correction of the acidosis according to the blood gases. The surgical treatment involves extensive debridement of the devitalized tissue. Occasionally, hemi-corporectomy may be necessary but disarticulation is done more often. In the abdominal cavity, attempt is made not to enter the peritoneal cavity during excision. Other important things are leaving the wounds open; use of oxygen through catheters (one or two liters per minute), topical antibiotic cream, loose dry dressings and strict isolation. The bedside debridement should be continued and when the wound is granulating, heterograft or split thickness skin graft is used to cover the wound.

Continued on page 37

## Aspects of Management

# What to tell your patients when you prescribe Valium® (diazepam/Roche)

### Survey shows significant correlation between comprehension and compliance



A study of compliance patterns reveals that more than 6 out of 10 patients made errors in self-administration of prescribed medication, largely due to lack of comprehension.\*

Misunderstanding of directions resulted in discrepancies in dosage schedules as well as in length of therapy.

Since evidence suggests that expanded verbal instructions may encourage compliance, the patient receiving Valium can benefit from your explanation of the dosage regimen, what response to expect from therapy and when to expect it.

### What Valium

#### (diazepam/Roche) can do

Your patients should know that 1) you are prescribing Valium as an adjunct to an overall program for the treatment of anxiety, and 2) Valium is given to relieve the symptoms of excessive anxiety and psychic tension while you help the patient to explore and deal with the underlying cause of his psychic tension.

Patients often interpret manifestations of anxiety, such as palpitations, hyperventilation, fatigue and muscle tension, as symptoms of a serious disease. However, when they

learn that these symptoms can be relieved by Valium therapy, patients can more readily understand the psychosomatic origin of their symptoms and to accept the nonpharmacologic measures you may recommend.

The time you devote to these explanations can be a therapeutic measure in itself. Most anxious patients respond to and benefit from a frank discussion with an objective, sympathetic professional.

At the start of treatment, establishing therapeutic goals helps the patient to learn *what* to expect and *when* to expect it. Patients should also be informed that the medication will be gradually reduced and discontinued upon attainment of the therapeutic goal.

Tapering of dosage is rarely necessary in short-term therapy, but when consistently higher doses are used for extended periods, patients should know that the gradual reduction of medication will be implemented in order to avoid sudden recurrence of symptoms or possible withdrawal symptoms.

Such recurrence is unlikely when the causes of the anxiety have been worked out satisfactorily within your overall treatment program.

### What Valium

#### (diazepam/Roche) can't do

It should be emphasized that there is no "magic" in any antianxiety tablet; that medication is not prescribed as a problem solver. Instead, Valium is being prescribed *as a temporary measure to relieve symptoms* generated by excessive anxiety and psychic tension.



\* Boyd JR, et al: *Am J Hosp Pharm* 31: 485-491, May 1974

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety associated with anxiety disorders, transient situational disturbances and functional or organic disorders, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms, or agitation, symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal, adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy). The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders,

possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication, abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics,



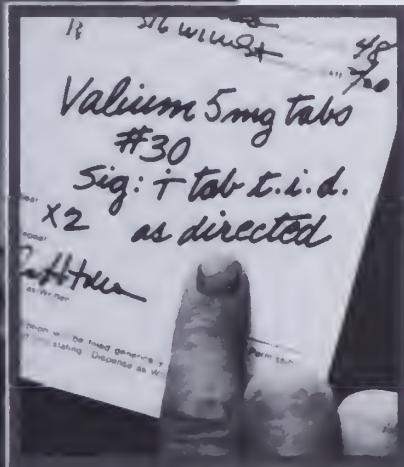
## Practical pointers on taking antianxiety medications

**do's** Patients should be instructed to keep to their dosage schedule exactly as prescribed. If they miss a dose, they should not try to make it up by taking two doses the next time. Ask them to contact you promptly if they experience worrisome side effects.

Explain that drowsiness is a common reaction to almost all calming agents, but that it usually subsides in a few days. Urge the patient to contact you for a possible dosage adjustment if drowsiness or other reactions persist.

Just as you request a complete list of all medications the patient is taking, suggest that this list be given to any other physician treating her/him.

Like all medicines, Valium should be kept out of reach of children and young people. Old or unused medication should be discarded.



**and don'ts** Since drowsiness is an occasional problem, patients should be advised against driving or operating hazardous machinery until they see how the medication affects them. They should also know that tranquilizers increase the effects of alcoholic beverages, which should therefore be avoided. Also, warn patients against simultaneous use of drugs that depress the central nervous system, particularly sedative hypnotics.

Patients should be aware of the importance of not sharing their medications with friends and neighbors; they should know that what you have prescribed for them may be contraindicated for others.

2-mg, 5-mg, 10-mg scored tablets  
**Valium<sup>®</sup>**  
**diazepam/Roche**  
An important adjunct to your treatment program for excessive psychic tension

barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

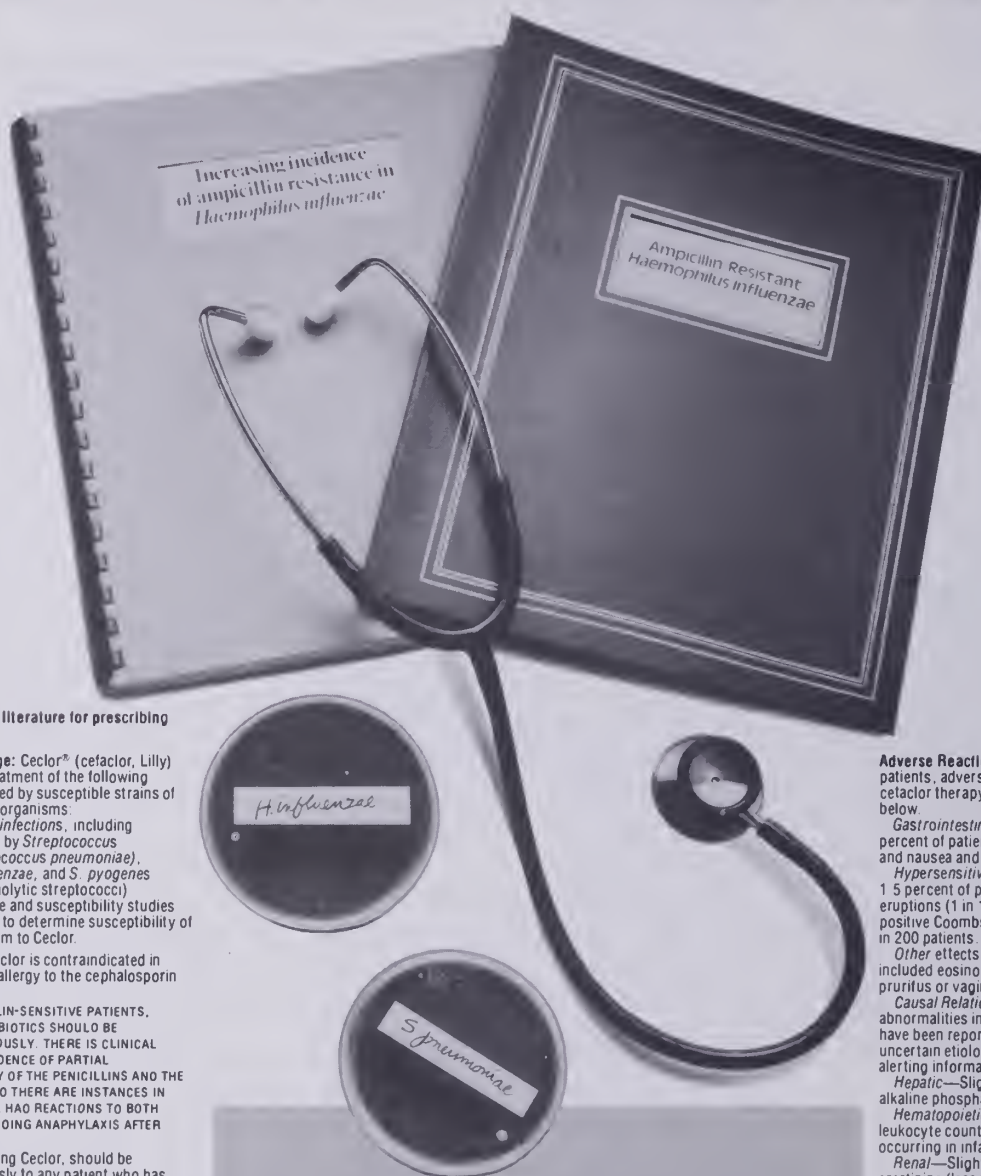
**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed, adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d., adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium<sup>®</sup> (diazepam/Roche) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500, Tel-E-Dose<sup>®</sup> packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10, Prescription Paks of 50, available in trays of 10.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

# An added complication... in the treatment of bacterial bronchitis\*



**Brief Summary.**  
Consult the package literature for prescribing information.

**Indications and Usage:** Cefclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

*Lower respiratory infections*, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci). Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

**Contraindication:** Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

**Warnings:** IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE).

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

**Precautions:** If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

**Usage in Pregnancy**—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

**Usage in Infancy**—Safety of this product for use in infants less than one month of age has not been established.

**Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis\*—are sensitive to treatment with Cefclor.<sup>1-6</sup>**

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.<sup>7</sup>

## Cefclor®

### cefaclor

Pulvules®, 250 and 500 mg

**Adverse Reactions:** In clinical studies in 1493 patients, adverse effects considered related to cefaclor therapy were uncommon and are listed below.

*Gastrointestinal* symptoms occurred in about 2.5 percent of patients and included diarrhea (1 in 70) and nausea and vomiting (1 in 90).

*Hypersensitivity* reactions were reported in about 1.5 percent of patients and included morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occurred in less than 1 in 200 patients.

*Other* effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

*Causal Relationship Uncertain*—Transitory abnormalities in clinical laboratory tests results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

*Hepatic*—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

*Hematopoietic*—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

*Renal*—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[070379R]

\*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.<sup>8</sup>

**Note:** Cefclor® (cefaclor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

#### References

1. Antimicrob. Agents Chemother., 8: 91, 1975.
2. Antimicrob. Agents Chemother., 11: 470, 1977.
3. Antimicrob. Agents Chemother., 13: 584, 1978.
4. Antimicrob. Agents Chemother., 12: 490, 1977.
5. Current Chemotherapy (edited by W. Siegenthaler and R. Luthy), II, 880. Washington, D.C.: American Society for Microbiology, 1978.
6. Antimicrob. Agents Chemother., 13: 861, 1978.
7. Data on file, Eli Lilly and Company.
8. Principles and Practice of Infectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr., and J. E. Bennett), p. 487. New York: John Wiley & Sons, 1979.

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.  
Eli Lilly Industries, Inc., Carolina, Puerto Rico 00630

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# THE MASA CME MEMBERSHIP REQUIREMENT

(1980 UPDATE)

## The Requirement

After much discussion and debate, a CME mandate for membership in the Medical Association was approved at the 1975 Annual Session. Attaining the AMA Physician's Recognition Award (PRA) will be the basic requirement for the continued membership in the Association.

The PRA requires 150 hours of CME activities over a three year period. This can be achieved by the physician in any manner desired e.g. 50 hours per year, or all in the last year—whatever pattern works best for the individual.

The PRA is available to any physician in any specialty. The applicant does not have to be an AMA member to receive the PRA. (Nonmembers are charged an administrative fee.)

This CME requirement is related to continued membership in the Medical Association. *There is currently no CME requirement for relicensure to practice medicine in Alabama.*

**Additional Ways to Meet This Requirement:** There are a number of national CME certification programs which have been determined to be compatible to the PRA, and can be used to meet this CME requirement. (See attached list.) These are reviewed by the MASA Council on Medical Education and approved by the Board of Censors. Recertification by a nationally recognized specialty board is another approved way. Every effort will be made to afford as many avenues as possible to meet the CME mandate.

**Who Must Fulfill Requirements?** All MASA members except those fully retired from practice, those still engaged in formal medical or specialty education or non-resident members.

Those with impaired health or special problems may be temporarily exempted by the Board of Censors.

**When Does It Become Effective?** July 1, 1979 was the starting date for this requirement, so the first three-year period for all members will cover July 1, 1979 to July 1, 1982.

At the end of that period, all members should have completed at least 150 hours of CME and reported this to the AMA, AAFP or other approved agency which issues the CME certification. (MASA does not review individual hours, attendance records, etc.—the physician should submit required documents to the certifying agency. All we need is information on who certified your efforts and the period of certification.)

If you already have completed a number of hours of CME, you can elect to "go back" three years from the date of application to get credit, e.g. if you earned 50 hours of CME in 1978 and 40 hours in 1979, you might want to apply for the PRA in 1980 so you could get credit for that past work. You can always go back three years from today's date and claim for any credits during that period—but can't claim back beyond three years.

**What CME Counts for the Requirement?** All kinds of educational activities are creditable for CME—not just the Category 1 programs. These Category 1 programs, sponsored by a CME accredited organization, do make up 40% of the PRA requirement (60 hours).

However, the other 60% (90 hours) can be credited for such learning activities as attending scientific meetings of non-accredited medical groups (Category 2), medical teaching (Category 3), preparing articles books, etc. (Category 4), and self-study of tapes, journals, participation in

audits and patient care meetings (Category 5). Check the AMA booklet sent to you on the PRA for further details.

So you can see that the active physician who keeps up in his area, and participates in local medical activities of his hospital and societies, should be able to meet this CME requirement without any great difficulty.

**Where Can I Get Needed CME?** There are many CME "producers" within the state, including MASA, medical schools, hospitals, specialty societies and others. Information on upcoming Alabama CME programs is published in the M.D. Calendar and further information is available from the Education Department's Master Calendar.

**How Can I Keep Track of My CME?** This is the tough part for many members. Most Category 1 CME producers will issue attendance certificates of some sort which can be filed. However, you are "on your own" for keeping track of most other CME activities since the majority of these are self-initiated. Only you will know how many hours you have spent in such activities as reading journals, medical teaching, patient care, conferences, etc.

We would recommend that you establish some sort of personal CME folder to file all certificates, forms, etc.—perhaps your secretary could maintain this for you. Then you need to remind yourself to make a note, each time you are involved in CME and put it in your CME folder, so you won't forget. It is very hard to remember and document your CME efforts if you wait three months or years to put it together.

To assist MASA members in this area, all members have been sent a personal CME record folder.

**Where Do I Get Help on CME Questions?** Please call the MASA Education Department at our toll free number 1-800-392-5668.

## **APPROVED ADDITIONAL AVENUES TO MEET THE CME MEMBERSHIP REQUIREMENT**

(As of April 1980)

Listed below are organizations having a CME certification program which is compatible with the AMA Physician's Recognition Award.

These have been reviewed by the Council on Medical Education and approved by the Board of Censors as satisfying the CME membership requirement.

- American Academy of Dermatology (AAD)
- American Academy of Family Physicians (AAFP)
- American Assn. of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS)
- American College of Emergency Physicians (ACEP)
- American College of Obstetricians & Gynecologists (ACOG)
- American College of Radiology (ACR)
- American Psychiatric Association (APA)
- American Society of Clinical Pathologists/College of American Pathologists (ASCP/CAP)
- American Society of Colon & Rectal Surgeons (ASCRS)
- American Society of Plastic & Reconstructive Surgeons, Inc. (ASPRS)
- American Urological Association, Inc. (AUA)
- Arizona Medical Association, Inc. (ArMA)
- California Medical Association (CMA)
- Medical Society of Virginia (MSV)
- Ohio State Medical Association (OSMA)
- Oregon Medical Association (OMA)
- Pennsylvania Medical Society (PMS)



# WHEN ANXIETY AND TENSION MAGNIFY PAIN

IN MUSCULOSKELETAL DISEASE\*

## A non-narcotic one-two punch against pain, with concurrent relief of anxiety/tension

# EQUAGESIC<sup>®</sup> <sup>IV</sup>

(meprobamate and ethoheptazine citrate with aspirin) Wyeth

### EQUAGESIC—Abbreviated Summary

**\*INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective for the treatment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease or tension headache.

Final classification of the less-than-effective indications requires further investigation.

The effectiveness of Equagesic in long-term use, i.e., more than four months, has not been assessed by systematic clinical studies. The physician should periodically reassess usefulness of the drug for the individual patient.

**CONTRAINDICATIONS:** Equagesic should not be given to individuals with a history of sensitivity or severe intolerance to aspirin, meprobamate, or ethoheptazine citrate.

**WARNINGS:** Careful supervision of dose and amounts prescribed for patients is advised, especially with those patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g., alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on or habituation to the drug. Where excessive dosage has continued for weeks or months, dosage should be reduced gradually rather than abruptly stopped, since withdrawal of a "crutch" may precipitate withdrawal reaction of greater proportions than that for which the drug was originally prescribed. Abrupt discontinuance of doses in excess of the recommended dose has resulted in some cases in the occurrence of epileptiform seizures.

Special care should be taken to warn patients taking meprobamate that tolerance to alcohol may be lowered with resultant slowing of reaction time and impairment of judgement and coordination.

**USAGE IN PREGNANCY AND LACTATION:** An increased risk of congenital malformations associated with the use of minor tranquilizers (meprobamate, chlori-

azepoxide, and diazepam) during the first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of child-bearing potential may be pregnant at the time of institution of therapy should be considered. Patients should be advised that if they become pregnant during therapy or intend to become pregnant they should communicate with their physicians about the desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical-cord blood at or near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breast-feeding patients, the drug's higher concentrations in breast milk as compared to maternal plasma levels should be considered.

Preparations containing aspirin should be kept out of the reach of children. Equagesic is not recommended for patients 12 years of age and under.

**PRECAUTIONS:** Should drowsiness, ataxia, or visual disturbance occur, the dose should be reduced. If symptoms continue, patients should not operate a motor vehicle or any dangerous machinery.

Suicidal attempts with meprobamate have resulted in coma, shock, vasomotor and respiratory collapse, and anuria. Very few suicidal attempts were fatal, although some patients ingested very large amounts of the drug (20 to 40 gm). These doses are much greater than recommended. The drug should be given cautiously, and in small amounts, to patients who have suicidal tendencies. In cases where excessive doses have been taken, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Hyperventilation has been reported occasionally. Any drug remaining in the stomach should be removed and symptomatic treatment given. Should respiration become very shallow and slow, CNS stimulants, e.g., caffeine, Meclizol, or am-

phetamine, may be cautiously administered. If severe hypotension develops, pressor amines should be used parenterally to restore blood pressure to normal levels.

**ADVERSE REACTIONS:** A small percentage of patients may experience nausea with or without vomiting and epigastric distress. Dizziness occurs rarely when meprobamate and ethoheptazine citrate with aspirin is administered in recommended dosage. The meprobamate may cause drowsiness but, as a rule, this disappears as therapy is continued. Should drowsiness persist and be associated with ataxia, this symptom can usually be controlled by decreasing the dose, but occasionally it may be desirable to administer central stimulants such as amphetamine or mephentermine sulfate concomitantly to control drowsiness.

A clearly related side effect to the administration of meprobamate is the rare occurrence of allergic or idiosyncratic reactions. This response develops, as a rule, in patients who have had only 1-4 doses of meprobamate and have not had a previous contact with the drug. Previous history of allergy may or may not be related to the incidence of reactions.

Mild reactions are characterized by an itchy urticarial or erythematous, maculopapular rash which may be generalized or confined to the groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema, and fever have also been reported.

More severe cases, observed only very rarely, may also have other allergic responses, including fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case), and hyperthermia. Treatment should be symptomatic such as administration of epinephrine, antihistamine, and possibly hydrocortisone. Meprobamate should be stopped, and resumption of therapy should not be attempted.

Rare cases have been reported where patients receiving meprobamate suffered from aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia. In nearly every instance reported, other toxic agents known to have caused these conditions have been associated with meprobamate. A few cases of leukopenia during

continuous administration of meprobamate are reported, most of these returned to normal without discontinuation of the drug. Impairment of accommodation and visual acuity has been reported rarely.

**OVERDOSE:** Two instances of accidental or intentional significant overdosage with ethoheptazine citrate combined with aspirin have been reported. These were accompanied by symptoms of CNS depression, including drowsiness and light-headedness, with uneventful recovery. However, on the basis of pharmacological data, it may be anticipated that CNS stimulation could occur. Other anticipated symptoms would include nausea and vomiting. Appropriate therapy of signs and symptoms as they appear is the only recommendation possible at this time. Overdosage with ethoheptazine combined with aspirin would probably produce the usual symptoms and signs of salicylate intoxication. Observation and treatment should include induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole blood transfusions.

**DESCRIPTION:** Each Equagesic tablet contains 150 mg meprobamate, 75 mg ethoheptazine citrate and 250 mg aspirin.

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\*This drug has been evaluated as possibly effective for this indication.

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Philadelphia, Pa 19101





# FOR MODERATE PAIN

A therapeutic dose of acetaminophen in one tablet

A therapeutic dose of two complementary analgesics

The convenience and economy of a dosage schedule of one tablet, every four hours as needed



## WHY NOT WYGESIC® IV

(65 mg propoxyphene HCl and 650 mg acetaminophen) Wyeth

### WYGESIC—Abbreviated Summary

**INDICATION:** For the relief of mild-to-moderate pain.

**CONTRAINDICATION:** Hypersensitivity to propoxyphene or to acetaminophen.

**WARNINGS:** CNS ADDITIVE EFFECTS AND OVERDOSAGE: Propoxyphene in combination with alcohol, tranquilizers, sedative-hypnotics, or other CNS depressants has an additive depressant effect. Patients taking this drug should be advised of the additive effect and warned not to exceed the dosage recommended. Toxic effects and fatalities have occurred following overdoses of propoxyphene alone or in combination with other CNS depressants. Most of these patients had histories of emotional disturbances or suicidal ideation or attempts, as well as misuse of tranquilizers, alcohol, or other CNS-active drugs. Caution should be exercised in prescribing large amounts of propoxyphene for such patients (see **Management of Overdosage**).

**DRUG DEPENDENCE:** Propoxyphene can produce drug dependence characterized by psychic dependence and less frequently, physical dependence and tolerance. It will only partially suppress the withdrawal syndrome in individuals physically dependent on morphine or other narcotics. The abuse liability of propoxyphene is qualitatively similar to codeine's although quantitatively less, and propoxyphene should be prescribed with the same degree of caution appropriate to the use of codeine.

**USAGE IN AMBULATORY PATIENTS:** Propoxyphene may impair the mental and/or physical abilities required for potentially hazardous tasks, e.g. driving a car or operating machinery. Patients should be cautioned accordingly.

**USAGE IN PREGNANCY:** Safe use in pregnancy has not been established relative to possible adverse effects on fetal development. **INSTANCES OF WITHDRAWAL SYMPTOMS IN THE NEONATE HAVE BEEN REPORTED FOLLOWING USAGE DURING PREGNANCY.** Therefore, propoxyphene should not be used in pregnant women unless, in the

judgement of the physician, the potential benefits outweigh the possible hazards.

**USAGE IN CHILDREN:** Propoxyphene is not recommended for children because documented clinical experience has been insufficient to establish safety and a suitable dosage regimen in the pediatric group.

**PRECAUTIONS:** Confusion, anxiety, and tremors have been reported in a few patients receiving propoxyphene concomitantly with orphenadrine. The CNS depressant effect of propoxyphene may be additive with other CNS depressants, including alcohol.

**ADVERSE REACTIONS:** The most frequent adverse reactions are dizziness, sedation, nausea, and vomiting. These seem more prominent in ambulatory than in nonambulatory patients; some of these reactions may be alleviated if the patient lies down. Other adverse reactions include constipation, abdominal pain, skin rashes, light-headedness, headache, weakness, euphoria, dysphoria, and minor visual disturbances. The chronic ingestion of propoxyphene in doses over 800 mg per day has caused toxic psychoses and convulsions. Cases of liver dysfunction have been reported.

**DRUG INTERACTIONS:** Propoxyphene in combination with alcohol, tranquilizers, sedative-hypnotics, and other CNS depressants has an additive depressant effect. Patients taking this drug should be advised of the additive effect and warned not to exceed the dosage recommended (see **Warnings**). Confusion, anxiety, and tremors have been reported in a few patients receiving propoxyphene concomitantly with orphenadrine.

**MANAGEMENT OF OVERDOSAGE: SYMPTOMS** The manifestations of serious overdosage with propoxyphene are similar to those of narcotic overdosage and include respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, pupillary constriction, and circulatory collapse. In addition to these characteristics, which are reversed by narcotic antago-

nists such as naloxone, there may be other effects. Overdoses of propoxyphene can cause delay of cardiac conduction as well as local or generalized convulsions, a prominent feature in most cases of severe poisoning. Cardiac arrhythmias and pulmonary edema have occasionally been reported, and apnea, cardiac arrest, and death have occurred.

Symptoms of massive overdosage with acetaminophen may include nausea, vomiting, anorexia, and abdominal pain, beginning shortly after ingestion and lasting for 12 to 24 hours. However, early recognition may be difficult since early symptoms may be mild and nonspecific. Evidence of liver damage is usually delayed. After the initial symptoms, the patient may feel less ill; however, laboratory determinations are likely to show a rapid rise in liver enzymes and bilirubin. In case of serious hepatotoxicity, jaundice, coagulation defects, hypoglycemia, encephalopathy, coma, and death may follow. Renal failure due to tubular necrosis, and myocardiopathy, have also been reported.

Ingestion of 10 grams or more of acetaminophen may produce hepatotoxicity. A 13-gram dose has reportedly been fatal.

**TREATMENT:** Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and institution of assisted or controlled ventilation. The narcotic antagonists, naloxone, nalorphine, and levallorphan, are specific antidotes against the respiratory depression produced by propoxyphene. An appropriate dose of one of these antagonists should be administered, preferably IV, simultaneously with efforts at respiratory resuscitation and the antagonist should be repeated as necessary until the patient's condition remains satisfactory. In addition to a narcotic antagonist, the patient may require careful titration with an anticonvulsant to control seizures. Analeptic drugs (e.g. caffeine or amphetamine) should not be used because of their tendency to precipitate convulsions.

Oxygen, IV fluids, vasopressors and other supportive measures should be used as indicated. Gastric lavage may be helpful. Activated charcoal can absorb a significant amount of ingested propoxyphene. Dialysis is of little value in poisoning by propoxyphene alone. Acetaminophen is rapidly absorbed, and efforts to remove the drug from the body should not be delayed. Copious gastric lavage and/or induction of emesis may be indicated. Activated charcoal is probably ineffective unless administered almost immediately after acetaminophen ingestion. Neither forced diuresis nor hemodialysis appears to be effective in removing acetaminophen. Since acetaminophen in overdose may have an antidiuretic effect and may produce renal damage, administration of fluids should be carefully monitored to avoid overload. It has been reported that mercaptamine (cysteine) or other thiol compounds may protect against liver damage if given soon after overdosage (8-10 hours). N-acetylcysteine is under investigation as a less toxic alternative to mercaptamine, which may cause anorexia, nausea, vomiting, and drowsiness. Appropriate literature should be consulted for further information. (JAMA 237:2406-2407, 1977).

Clinical and laboratory evidence of hepatotoxicity may be delayed up to one week. Acetaminophen plasma levels and half-life may be useful in assessing the likelihood of hepatotoxicity. Serial hepatic enzyme determinations are also recommended.

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#### B. *Non-Clostridial Myositis*:<sup>1</sup>

Rapidly necrotizing myositis caused by a variety of gram negative organisms may complicate extensive soft tissue infections. Usually, the initial surgical debridement has been inadequate. These infections usually occur after the compound long bone fractures or perineal injuries. The systemic manifestations include a sudden onset of tachycardia, fever, disorientation and hemolysis. Surgical intervention must be immediate to remove all non-viable muscle tissue beneath. Amputation is frequently preferred when local tissue necrosis is too extensive to permit limb salvage.

#### C. *Human Bite Infections*:<sup>1</sup>

The initial management of the human bite includes excision of the wound, copious saline irrigation and allowing the wound to heal by secondary intention. Immobilization and antibiotic therapy, usually Penicillin, are necessary. The infection which results from the inadequate treatment is always caused by polymicrobial consisting of fusiform bacilli, clostridial group, *Treponema Pallidum*, spirochetes, rabies virus, *Pasteurella multocida*, staphylococci, anaerobic streptococci, aerobic hemolytic streptococci and gram negative rods. When the infection is established, radical debridement, principally excision of the infected area must be performed.

#### D. *Gas In The Wound* (Table III):<sup>36,37</sup>

The detection of gas in the infected tissue is considered an ominous clinical sign. MacLennan<sup>34</sup> and Altmeier<sup>28</sup> were the first authors to stress the occurrence and potential severity of non-clostridial crepitant infections. Nichols<sup>36</sup> recently summarized the clinical workup of gas in the wound. Gas present in the soft tissues, in the absence of local or systemic signs of infection, indicates mechanical sources of gas, like excessive undermining of tissue planes during operation or air leaks from defects in the continuity of the esophagus or respiratory tract. It's usually possible to detect the presence of gas in infectious processes by clinical examination alone. In doubtful cases, a rapid radiological study of the involved area is helpful. Once a gas-forming infection is suspected, needle aspiration of the involved area should be carried out under sterile conditions. The aspirated specimen should be used for aerobic and anaerobic cultures and gram stain examination. One should also note whether a putrid odor is present in the aspirated specimen.

**MANAGEMENT OF GAS INFECTION:** Of all the gas infections, clostridial myonecrosis is the most rapidly spreading and lethal disease in man. This has been described in a subsequent paragraph of this paper. Immediate treatment should be started soon after needle aspiration. The suggested initial treatment has been summarized in Table III. Major limb amputations should be avoided if at all possible. Prior to local excision of the involved tissues and limb amputations (the only two choices available), proper antibiotics should be started soon after the diagnosis.

#### E. *Clostridial Gas Gangrene*:<sup>29,30,31,32,38,39</sup>

Pathogenesis of clostridial gas gangrene infection: The first anaerobic bacteria of the group of 90 species of bacteria known as clostridia was studied in 1861 by Louis Pasteur. Once started, the pathological process of true gas gangrene can be so fulminating and rapid that death often occurs within 30 to 48 hours. The two prime factors important in causing this infection are contamination of tissue with the clostridial organisms and hypoxia. Exotoxins produced by these organisms destroy, liquefy and dissect the surrounding tissues

producing a fulminating rapid spread of infection. Intense woody edema develops quickly in the area of infection and frequently causes occlusion of the microcirculation. Interference with the microcirculation and intense edema fosters further hypoxia of the tissues which further enhances growth of the organisms.

**THE DIAGNOSES:** The patient is apprehensive, anxious and restless with early onset of rapidly progressive edema of extreme degree, crepitation of the tissues in the area of the wound and characteristic bronze color changes of the skin. There is a thin watery type of drainage from the wound which soon changes to a foul putrid pus. A gram stain will demonstrate large gram positive rods.

**TREATMENT:** Crystallin Penicillin G is the specific antibiotic for the anaerobic clostridial organisms of the perfringens type. The use of hyperbaric oxygen as a supplemental form of therapy is still questioned by some. But in a series of cases reported by Hitchcock<sup>30</sup>, there was a 78.2% survival for those patients receiving hyperbaric oxygen, surgical debridement and antibiotics, in contrast to a survival rate of 55% for those patients receiving no hyperbaric oxygen therapy but only surgical excision and antibiotics. These cases involved primarily the diffuse spreading cellulitis or diffuse spreading myositis excluding the localized cases. He also proved in experimental animals that surgical debridement, Penicillin and Keflin, along with hyperbaric oxygen, gave a 95% survival.

#### III. *NON-OPERATIVE INFECTIONS*:<sup>1</sup>

Although the following conditions are placed in non-surgical category, it is understood that when signs of inflammation occur in closed wounds, sutured or puncture type wounds, opening of such wounds is essential as primary therapy.

##### A. *Erysipelas*:

This condition is extremely rare today. It is an easily recognized lesion caused by a Group A hemolytic streptococcus. The major problem that erysipelas presents is differentiation from acute hemolytic streptococcal cutaneous gangrene which is caused by the microaerophilic streptococcus. Early in the course, streptococcal cutaneous gangrene may appear as erysipelas but the rapid appearance of blisters containing a reddish, odorless fluid and continued advancement of the irregular border despite Penicillin therapy lead to the diagnosis.

##### B. *Lymphangitis and Lymphadenitis*:<sup>41</sup>

Recurrent episodes of pustular infections may appear distal to an area of lymphatic obstruction. This may follow a variety of surgical infections such as necrotizing fasciitis, suppurative thrombophlebitis, or congenital lymphatic obstruction (Milroy's Disease). When the cultures reveal staphylococci, successful treatment includes appropriate antibiotic, daily hexachlorophene baths and incision and drainage of the persistent pustules. When the cultures are persistently negative, Tetracycline in dosages of one to two grams per day is almost always effective. Also, the workup should include a search for the dysglobulinemia, Collagen Disease, chronic hepatitis, peripheral vascular disease and allergies.

##### C. *Sporotrichosis*:<sup>1,42</sup>

This condition represents a specific cause of subacute ulcerative lymphadenitis which is often confused with bacterial synergistic gangrene. The patient is often healthy as opposed to cachectic patient with bacterial gangrene. Systemic toxicity with sporotrichosis is often associated with primary bone involvement. Approximately half of the cases of sporotrichosis

stem from skin breaks in contact with fertilizer containing the fungus. Athletes with abberations during workouts are common examples. The lesions are usually innocuous to start with and subsequently get infected with the development of an indolent ulcer. Multiple ulcerating lesions following lymph node distribution could develop. The proximal lymph nodes are involved with progressive suppuration. Treatment with 15 qts. of saturated solution of Potassium Iodine, t.i.d., for two to six weeks results in complete healing. Failure to respond to iodine therapy or severe disseminated disease may require Amphotericin B.

#### D. Purpura Fulminans:

Rapidly coalescing purpuric skin lesions distributed over the entire body are characteristic of the disseminated intravascular coagulation associated with Pneumococcal or meningococcal infections. The irregular structured blue skin lesions appeared first to be limited to the more superficial layers of the skin. Early recognition of the cutaneous purpura and prompt initiation of Heparin therapy prevents progressive skin destruction.

## CONCLUSION:

A brief review of various surgical soft tissue infections has been presented.

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- provides effective symptomatic relief
- b.i.d. dosage simplifies therapy
- scored tablet for dosage flexibility

## OPTIMINE®

azatadine maleate. 1 mg. tablets

**CONTRAINDICATIONS** Use in Newborn or Premature Infants: This drug should not be used in newborn or premature infants.

**Use in Nursing Mothers**: Because of the higher risk of antihistamines for infants generally and for newborns and prematures in particular, antihistamine therapy is contraindicated in nursing mothers.

**Use in Lower Respiratory Disease**: Antihistamines should NOT be used to treat lower respiratory tract symptoms including asthma.

Antihistamines are also contraindicated in the following conditions: hypersensitivity to azatadine maleate and other antihistamines of similar chemical structure; monoamine oxidase inhibitor therapy (See DRUG INTERACTIONS Section).

**WARNINGS** Antihistamines should be used with considerable caution in patients with: narrow angle glaucoma; stenosing peptic ulcer; pyloroduodenal obstruction; symptomatic prostatic hypertrophy; bladder neck obstruction.

**Use in Children**: In infants and children especially, antihistamines in overdosage may cause hallucinations, convulsions, or death.

As in adults, antihistamines may diminish mental alertness in children. In the young child, particularly, they may produce excitation.

OPTIMINE TABLETS ARE NOT INTENDED FOR USE IN CHILDREN UNDER 12 YEARS OF AGE.

**Use in Pregnancy**: Experience with this drug in pregnant women is inadequate to determine whether there exists a potential for harm to the developing fetus.

**Use with CNS Depressants**: Azatadine maleate has additive effects with alcohol and other CNS depressants (hypnotics, sedatives, tranquilizers, etc.).

**Use in Activities Requiring Mental Alertness**: Patients should be warned about engaging in activities requiring mental alertness, such as driving a car or operating appliances, machinery, etc.

**Use in the Elderly (approximately 60 years or older)**: Antihistamines are more likely to cause dizziness, sedation, and hypotension in elderly patients.

**PRECAUTIONS** Azatadine maleate has an atropine-like action and, therefore, should be used with caution in patients with: a history of bronchial asthma; increased intraocular pressure; hyperthyroidism; cardiovascular disease; hypertension.

**DRUG INTERACTIONS** MAO inhibitors prolong and intensify the anticholinergic (drying) effects of antihistamines.

**ADVERSE REACTIONS** The most frequent adverse reactions are underlined.

**General**: Urticaria, drug rash, anaphylactic shock, photosensitivity, excessive perspiration, chills, dryness of mouth, nose, and throat.

**Cardiovascular System**: Hypotension, headache, palpitations, tachycardia, extrasystoles.

**Hematologic System**: Hemolytic anemia, thrombocytopenia, agranulocytosis.

**Nervous System**: Sedation, sleepiness, dizziness, disturbed coordination, fatigue, confusion, restlessness, excitation, nervousness, tremor, irritability, insomnia, euphoria, paresthesias, blurred vision, diplopia, vertigo, tinnitus, acute labyrinthitis, hysteria, neuritis, convulsions.

**Gastrointestinal System**: Epigastric distress, anorexia, nausea, vomiting, diarrhea, constipation.

**Genitourinary System**: Urinary frequency, difficult urination, urinary retention, early menses.

**Respiratory System**: Thickening of bronchial secretions, tightness of chest and wheezing, nasal stuffiness.

**OVERDOSAGE** Antihistamine overdosage reactions may vary from central nervous system depression to stimulation. Stimulation is particularly likely in children. Atropine-like signs and symptoms (dry mouth, fixed, dilated pupils, flushing, and gastrointestinal symptoms) may also occur.

If vomiting has not occurred spontaneously, the patient should be induced to vomit. This is best done by having him drink a glass of water or milk after which he should be made to gag. Precautions against aspiration must be taken, especially in infants and children.

If vomiting is unsuccessful, gastric lavage is indicated within three hours after ingestion and even later if large amounts of milk or cream were given beforehand. Isotonic and ½ isotonic saline is the lavage solution of choice.

**Saline cathartics**, such as milk of magnesia, draw water into the bowel by osmosis and therefore are valuable for their action in rapid dilution of bowel content.

**Stimulants** should not be used.

Vasopressors may be used to treat hypotension.

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**for relief of allergy symptoms**

**Rx only**

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Tail of whipworm  
(*Trichuris trichiura*)

# Vermox<sup>®</sup>: the only anthelmintic highly effective against whipworm.

	Cure Rate	Egg Reduction
VERMOX <sup>®</sup>	68% *	93% **
Mintezol <sup>1</sup>	35% †	45% ††
Antiminth <sup>2</sup>	Not Indicated	
Povan <sup>3</sup>	Not Indicated	

## Also highly effective against roundworm and hookworm

Since whipworm, roundworm and hookworm are all soil-borne helminths, mixed infections are not uncommon. Only one anthelmintic exhibits high efficacy rates for all three nematodes: whipworm—68%; roundworm—98%; hookworm—96%. That agent is VERMOX.<sup>®</sup>

Please see following page for Summary of Prescribing Information.

## Broad-spectrum coverage in mixed helminthic infections

**Vermox<sup>®</sup>** TABLETS  
(mebendazole)



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*Committed to research...  
because so much remains to be done.*

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JPI 023





**Broad-spectrum  
coverage in mixed  
helminthic infections**

**Vermox<sup>®</sup>** TABLETS  
(mebendazole)

**Contraindications** VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

**Precautions PREGNANCY:** VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

**PEDIATRIC USE:** The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

**Adverse Reactions** Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

**Dosage and Administration** The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

\* Mean cure rate of VERMOX<sup>®</sup> in treating whipworm; cure rate range of 61-75%. Data on file at Janssen Pharmaceutica Inc.

\*\* Mean egg reduction of VERMOX<sup>®</sup> in treating whipworm; egg reduction range of 70-99%. Data on file at Janssen Pharmaceutica Inc.

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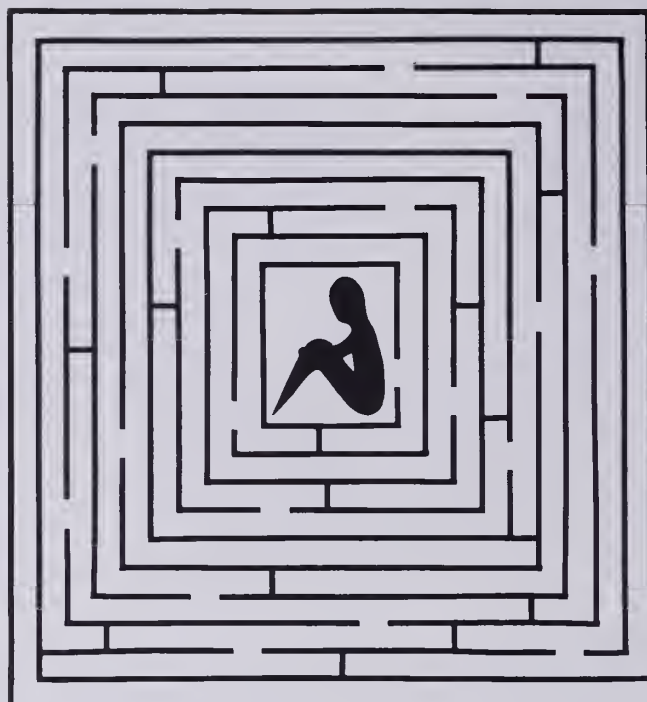
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# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**EMERGENCY MEDICINE:** Age 31; University of Mississippi, 1979; seeking practice in specialty in a town with a population of 25,000-100,000. Available for practice July 1980. LW-050180.

\*\*\*

**FAMILY PRACTICE:** Age 49; Emory, 1955; American Board Certified in Family Practice; seeking practice preferably in an out-patient community health clinic with some hospital emergency room work in the Northeastern part or mountainous region 5,000 to 25,000 population. Available June 1980. LW-030180.

\*\*\*

**FAMILY PRACTICE:** Age 51; Cornell University, 1954; American Board Certified; seeking practice in single specialty group, research or institutionally based. Available July 1980. LW-20020.

\*\*\*

**GENERAL PRACTICE:** Age 27; Wisconsin, 1977; American Board Eligible in 1980; seeking practice in industrial, institutional or private or government clinic preferably in the Birmingham area. Available July 1980. LW-020680.

\*\*\*

**GENERAL PRACTICE/INTERNIST/EMERGENCY MEDICINE:** Age 31; Washington University; American Board Eligible in 1980; seeking practice in specialty, multi-specialty, general or emergency medicine preferably near Birmingham and/or Montgomery in a town with a population of 250,000 up to 1 million. Available July 1980. LW-020780.

\*\*\*

**INTERNAL MEDICINE:** Age 32; University of Alabama, 1975; seeking practice preferably in the Mobile area in internal medicine. Available 1980. LW-010280.

\*\*\*

**INTERNAL MEDICINE:** Age 33; Louisiana State, 1976; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group, or partnership. Available October 1980. LW-20306.

\*\*\*

**INTERNAL MEDICINE/PULMONARY:** Age 35; Prince of Wales, 1969; American Board Certified, seeking practice in general, specialty, associate or institutional in a town with a population of 10,000 plus. Available July 1980. LW-11029.

\*\*\*

**INTERNAL MEDICINE:** Age 31; North Carolina, 1976; American Board Certified in Internal Medicine in 1980; seeking practice in general, including out-patient, in-patient and emergency room care preferably in a moderate to large city, southeastern area. Available in spring of 1981. LW-030380.

\*\*\*

**INTERNAL MEDICINE:** Age 32; Meharry, 1977; seeking practice in clinic, industrial, assistant or associate or institutional. Available now. LW-050280.

\*\*\*

**OBSTETRICS AND GYNECOLOGY:** Age 29; University of Virginia, 1976; American Board Eligible; seeking practice in specialty preferably in the Southern part in a town with a population of 10,000-25,000. Available September 1980. LW-050380.

**OBSTETRICS AND GYNECOLOGY:** Age 33; University of Texas, 1973; American Board Eligible; seeking practice in single specialty group, multi-specialty group or partnership. Available August 1980. LW-21032.

\*\*\*

**ORTHOPEDICS:** Age 30; University of Missouri, 1975; American Board Certified; American Board Eligible in 1981; seeking practice in specialty in a town with a population over 40,000. Available July 1981. LW-050480.

\*\*\*

**PEDIATRICS/GENERAL PRACTICE:** Age 42; Greiburg, West Germany, 1967; seeking practice in general, specialty, assistant or associate in the central part of Alabama in a town with a population not less than 8,000. LW-020880.

\*\*\*

**PEDIATRICIAN:** Age 29; University of Alabama, 1975; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, and/or partnership in a medium-sized or larger town, preferably between 20,000 to 80,000 population. Available November 1980. LW-120279.

\*\*\*

**PEDIATRICS:** Age 29; University of Alabama, 1975; seeking practice in specialty preferably in Birmingham or in a town with a population of 200,000. Available September 1980. LW-010180.

\*\*\*

**SURGERY, GENERAL:** Age 30; University of Alabama, 1974. National Board Certified; will be American Board Eligible in 1980; seeking practice in partnership, single specialty group or institutionally based. Available July 1980. LW-20307.

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**FAMILY PRACTITIONER**—Existing multi-specialty clinic seeks physicians for new satellite clinic in Butler, Alabama. First year guaranteed salary with excellent benefits. Partnership opportunity. PW-050180.

**SURGERY, GENERAL-ABDOMINAL:** Age 34; Alabama, 1971; National Board Certified; American Board Certified in general surgery; seeking practice in solo, partnership or multi-specialty group. Available August 1980. LW-20899.

\*\*\*

**SURGERY, GENERAL:** Age 50; University of Alabama, 1964; American Board Certified; seeking practice in group, assistant or associate, industrial, or institutional preferably in the Southern section. Available now. LW-050580.

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**SURGERY, CLINICAL:** University of Alabama, 1964; American Board Certified; seeking practice in specialty in the Southern section. LW-050680.

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**SURGERY, GENERAL:** Age 34; Mississippi, 1972; American Board Certified; seeking practice preferably in Birmingham or Gulf Coast in a town with a population of 100,000 or greater. Available in the Fall of 1980. LW-050780.

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**SURGERY, GENERAL/VASCULAR:** Age 29; Duke, 1977; seeking practice in specialty in a town with a population of 50,000-200,000. Available July 1982. LW-050880.

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**UROLOGY:** Age 30; Tulane, 1975; seeking practice in specialty in a town with a population of 20,000 and over. Available July 1980. LW-030580.

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# For recurrent attacks of urinary tract infection in women

## Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

### Just one tablet b.i.d. for 10 to 14 days



- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient b.i.d. dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications and Usage:** For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

**Also for the treatment of documented *Pneumocystis carinii* pneumonitis.** To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (Federal Register, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

**Warnings:** Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

**Urinary Tract Infections:** Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

**Supplied:** Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).



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**Please see back cover.**

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ROCHE

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The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of

Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has no significant effect on other normal, necessary intestinal flora.

## Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.



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NDS



## The Ups and Downs of Joint Owner- ship

See page 25

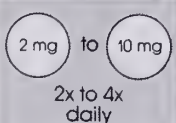

SEP 10 1980

# Monitoring patient response to Valium® (diazepam/Roche)

## Assessing initial response to therapy

During the first follow-up visit after initiating therapy, both physician and patient should determine if Valium (diazepam/Roche) is having the desired effect. Most patients will promptly report a feeling of relaxation and relief of anxiety-linked symptoms such as insomnia, headaches, palpitations and hyperventilation. You will probably observe that the patient is calmer and more relaxed. If, however, patient response does not measure up to expectations, a reevaluation of the patient's profile with modification of the dosage regimen should be considered.

## Making dosage adjustments

START	ADJUST
	

With any psychoactive medication it is good medical practice to initiate therapy at base dosage levels and titrate to the patient's needs. With Valium, experience has shown that 5 mg t.i.d. is usually sufficient although some patients with severe or persistent anxiety may require higher dosages initially. In geriatric or debilitated patients, the recommended dosage is 2 to 2½ mg once or twice daily.

When anxiety fluctuates, as is common with most patients, the dosage may be adjusted as needed during the course of therapy; three strengths in scored tablets give you unmatched flexibility and simplicity in individualizing dosage.

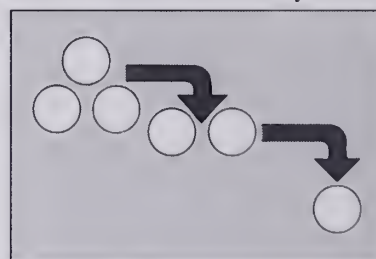
## Evaluating progress toward therapeutic goals

SET GOALS						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

At the beginning of therapy it is now common practice for both physician and patient to establish treatment goals and to estimate the amount of time needed to achieve them. Then the patient knows what to expect and when to expect it.

Some physicians find that compiling a checklist of presenting symptoms and complaints is useful for assessing the patient's response from visit to visit. In this way, progress toward attainment of the therapeutic goal is reviewed at regular intervals. As patients feel their symptoms abate and begin to develop insight into the sources of their anxiety and psychic tension, the checklist can be expected to dwindle.

## Discontinuing pharmacologic intervention



When you decide to discontinue therapy, tapering dosage is good medical practice. Although rarely necessary after short-term treatment with Valium, gradual dosage reduction is advisable for patients who have been on extended therapy. This gradual discontinuance should preclude either recurrence of pretreatment symptoms or development of untoward side effects. Symptoms of withdrawal have almost always been associated with abrupt discontinuance of therapy at higher dosages taken continuously over long periods of time.

2-mg, 5-mg, 10-mg scored tablets  
**Valium®**  
diazepam/Roche

An Important Adjunct to Your Treatment Program for Excessive Anxiety



See the following page for a summary of product information.



## Valium® (diazepam/Roche) ®

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety associated with anxiety disorders, transient situational disturbances and functional or organic disorders, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation, symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal, adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, atetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma. May be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication, abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. **Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed, adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d., adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated (See Precautions). **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500, Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10, Prescription Paks of 50, available in trays of 10.



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The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

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Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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# From the Executive Director

## Freedom to Choose

Too much of what has passed for the debate over the cost of health has been pious hand-wringing and buck-passing.

Those who have claimed the badge of health care "authority" or "expert" remind me of the classic definition of a celebrity: One who is famous for being famous. It seems that we have some self-styled authorities who are merely expert at being expert.

These are the ones who have told us, ad nauseum, for example, that there is market failure in the health care industry because neither the doctor, the patient, the hospital nor the third-party payor has any effective interest in controlling costs. If that's the disease, what's the remedy? They don't say.

Another frequently cited phenomenon is "market inversion," which is this apparent paradox: increasing the supply of vendors (providers) in the market seems always to increase the price—rather than the reverse, as you would normally expect if the ideas of Adam Smith were still alive and well.

The problem is that most of those acclaimed as expert in this field are beholden, in one way or another, to government. And they aren't likely to bite the hand that feeds. Neither are they likely to blame consumers, for consumers are voters and government wouldn't like that, certainly not in an election year.

However, Alfred E. Kahn, the President's tireless one-man band, said in a recent speech on his favorite theme, inflation, that government must take a major share of the blame for inflationary pressures in health care. Now that seems pretty obvious, but it's quite an admission for a presidential appointee to make.

While he tends to share the general tunnel vision that sees health care inflation as separate and distinct from inflation in general, he does make a few honest confessions, considering the source. The cost of medical care has gone up, he said, in great part because of Medicaid and Medicare and government boiler pressure in other forms, such as direct hospital construction programs, tax exempt bonds, tax exclusion from employees' incomes of employers' contributions to health insurance plans and so on.

All this government intervention, Mr. Kahn admits almost apologetically, "has distorted the allocation of resources into health care . . . on the side of excess."

But certainly he is right on target when he says (and this deserves emphasis):

*" . . . Sooner or later we have to face up the consequences of having created a system in which the consumer views these costly (health) services as essentially free goods."*

Something for nothing, the persistent belief in the reality of the free lunch, coupled with rising demands, fed by politicians, for more and more of the same.

It is against this background that Rep. Richard A. Gephardt (D-Mo.) and Rep. Dave A. Stockman (R-MI) have proposed the National Health Care Reform Act of 1980. It would eliminate government-mandated health planning and phase out Medicare and Medicaid programs.

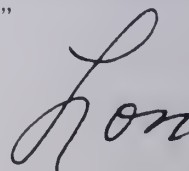
All Americans would be covered under the proposed bill but it depends on the working, middle-class sector to make it work. Employees would be offered a broad variety of health insurance plans, while retaining most of their freedom to choose among health care providers. While the plans would be paid for, at least in part, by employers, there would be price and income tax incentives for workers to choose plans that offered a basic package of benefits for the lowest price.

The incentive for employees to select a cost-efficient plan involves their right to choose among options offered to them. If they select a plan that costs less than the employer contribution, they could collect a tax-free rebate of up to \$500 and pay their own doctor bills, if they choose. If they select a plan that costs more than one judged to be reasonable protection—that is, if they opt for deluxe coverage instead of the standard model, they would pay the difference.

Just good, old-fashioned American freedom. But the competition it would provide in the medical marketplace would be, proponents say, beneficial, making costs responsive to buyers.

And, who knows, it could be one approach, considering the mess we're in. But Mr. Kahn is probably right when he observes rather sadly that no one solution is going to work now, that if health care costs are to be restrained by something close to traditional market forces, "we are going to have to proceed on a variety of fronts."

No one, he says, seems to have a "simple, unified and internally consistent blueprint."





# Pioneers in Medicine For the Family



## BOOTS PHARMACEUTICALS, INC.

Operating in the U.S. since 1977, Boots is a world-wide leader in pharmaceutical research and manufacture. Boots has directed its efforts toward providing products useful in the practice of family medicine.

Some of our better known products are Ru-Tuss<sup>®</sup> and Ru-Vert<sup>®</sup>. This advertisement highlights three other products particularly useful for the family.

**F-E-P CREME<sup>®</sup>**

**TWIN-K<sup>®</sup>**

**SU-TON<sup>®</sup>**





For the Majority of Steroid-Responsive  
Dermatoses\* Seen in Family Practice

## F-E-P CREME®

(Iodochlorhydroxyquin — Pramoxine HCl — Hydrocortisone)

### The 4 in 1 Corticosteroid Cream

Anti-inflammatory, antifungal, antibacterial actions, and, uniquely, a topical anesthetic for immediate relief of the itching or burning that frequently accompanies skin problems. One size (1/2 ounce), one strength for ease of prescription.

\*This drug has been evaluated as possibly effective for these indications. See prescribing information on last page of this advertisement.



## For Potassium Supplementation

### TWIN-K®

Each 15 ml supplies 20 mEq of potassium as a combination of potassium gluconate (15 mEq) and potassium citrate (5 mEq) in a sorbitol base.

### The good tasting potassium supplement

- Designed for prophylactic use with diuretics and adrenocorticoids.
- Pleasant taste and convenient b.i.d. dosage aid patient compliance.
- Avoids the problems of a chloride salt.

"The organic salt can be given as a liquid without producing significant gastric symptoms and without an untoward effect on the mucosa of the small intestine."<sup>1</sup>

Note: In hypokalemic hypochloremic alkalosis, potassium chloride supplementation may be preferred.

<sup>1</sup> Beeson-McDermott, Textbook of Medicine, 15th Ed 1979, WB Saunders Co., Philadelphia, p. 1959

See prescribing information on last page of this advertisement.





For the Geriatric Patient

# SU-TON<sup>®</sup>

Liquid Tonic

A pleasant tasting prescription tonic containing iron, vitamins, minerals, an analeptic and 18% alcohol. Ideal for those who may benefit from vitamin deficiency prevention. Just one tablespoon before each meal.

Each 45 ml (3 tablespoonfuls) contains:

Pentylenetetrazol. ....	30 mg
Niacin. ....	50 mg
Vitamin B-1. ....	10 mg
Vitamin B-2. ....	5 mg
Vitamin B-6. ....	1 mg
Vitamin B-12. ....	3 mcg
Choline. ....	100 mg
Inositol. ....	50 mg
Manganese (as Manganese Sulfate). ....	1 mg
Magnesium (as Magnesium Sulfate). ....	2 mg
Zinc (as Zinc Sulfate). ....	1 mg
Iron (as Ferric Pyrophosphate, Soluble). ....	22 mg
Alcohol. ....	18%

See prescribing information on last page of this advertisement.

Please send me patient starter samples of:

- ☐ F-E-P CREME<sup>®</sup>
- ☐ TWIN-K<sup>®</sup>
- ☐ SU-TON<sup>®</sup>

Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

## F-E-P CREME®

**DESCRIPTION:** F-E-P Creme is a topical water soluble anti-inflammatory, anesthetic, preparation intended for treatment of various inflammatory skin disorders. The drug contains the following active ingredients:

Iodochlorhydroxyquin . . . . .	3.0%
Pramoxine Hydrochloride . . . . .	0.5%
Hydrocortisone . . . . .	1.0%

### INDICATIONS AND USAGE:

Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows, "Possibly effective": Contact or atopic dermatitis; impetiginized eczema; nummular eczema; infantile eczema; endogenous chronic infectious dermatitis; stasis dermatitis; pyoderma; nuchal eczema and chronic eczematoid otitis externa; acne urtica; localized or disseminated neurodermatitis; lichen simplex chronicus; anogenital pruritus (vulvae, scroti, ani), folliculitis; bacterial dermatoses; mycotic dermatoses such as tinea (capitis, cruris, corporis, pedis); moniliasis; intertrigo. Final classification on the less-than-effective indications requires further investigation.

Pramoxine Hydrochloride promptly relieves pain and itch. This compound may be used safely on the skin of those patients sensitive to the "caine" type local anesthetics.

**CONTRAINDICATIONS:** Hypersensitivity to F-E-P Creme, or any of its ingredients or related compounds; lesions of the eye; tuberculosis of the skin; most viral skin lesions (including herpes simplex, vaccinia and varicella).

**WARNINGS:** This product is not for ophthalmic use. In the presence of systemic infections, appropriate antibiotics should be used.

**USE IN PREGNANCY:** Topical steroids have not been reported to have an adverse effect on pregnancy. However, fetal abnormalities have been produced in pregnant laboratory animals that have been exposed to large doses of topical corticosteroids. Drugs of this class should not be used extensively during pregnancy.

**PRECAUTIONS:** F-E-P Creme may be irritating to the skin in some patients. If irritation occurs discontinue therapy. Staining of clothes or hair may also occur with use of this preparation. Although systemic toxicity has not been reported with this drug, adrenal pituitary suppression is possible, especially when the drug is used extensively or kept under an occlusive dressing for a prolonged period. Iodochlorhydroxyquin can be absorbed through the skin and interfere with thyroid function tests. Therapy with this preparation should stop at least a month before performance of these tests.

The ferric chloride test for phenylketonuria (PKU) can be positive if F-E-P Creme is on the diaper or in the urine. Prolonged use of this drug may result in an overgrowth of nonsusceptible organisms requiring appropriate therapy.

**ADVERSE REACTIONS:** Skin rash or hypersensitivity may occur following topical application. The following local adverse reactions have been reported with topical corticosteroids, especially under occlusive dressings: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy, striae, miliaria. Discontinue therapy if untoward reactions occur.

**DOSAGE AND ADMINISTRATION:** Apply a thin layer of the drug to affected parts 3-4 times daily.

### Note:

1. F-E-P Creme is distributed with 3.0% Iodochlorhydroxyquin for use when antibacterial/antifungal activity is desired.

2. F-E-P Creme (Plain) is the regular formulation, but without Iodochlorhydroxyquin.

Both of these preparations contain pramoxine hydrochloride, which has topical anesthetic properties. Pramoxine is not chemically related to benzoic acid or amide type topical anesthetics. Patients can tolerate pramoxine although they may be sensitive to other "caine" type of topical or local anesthetics.

### HOW SUPPLIED:

F-E-P Creme ½ ounce (15 gm) tubes NDC 0524-0026-51	F-E-P Creme Plain ½ ounce (15 gm) tubes NDC 0524-0025-51
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**CAUTION:** Federal law prohibits dispensing without a prescription.

## TWIN-K®

**DESCRIPTION:** Each 15 milliliter (tablespoonful) supplies 20 mEq of elemental potassium as a combination of potassium gluconate (15 mEq) and potassium citrate (5 mEq) in a sorbitol base with flavoring.

**INDICATIONS AND USAGE:** For use as oral potassium therapy in the prevention or treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. It may be used in the treatment of cardiac arrhythmias due to digitalis intoxication.

**CONTRAINDICATIONS:** Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause. This product should not be used in patients receiving aldosterone antagonists or triamterene.

**WARNINGS:** TWIN-K (potassium gluconate and potassium citrate) is a palatable form of oral potassium replacement. It appears that little if any potassium gluconate-citrate penetrates as far as the jejunum or ileum where enteric coated potassium chloride lesions have been noted. Excessive, undiluted doses of TWIN-K may cause a saline laxative effect.

To minimize gastrointestinal irritation it is recommended that TWIN-K be taken with meals or diluted with water or fruit juice. A tablespoonful (15 ml) in 8 ounces of water is approximately isotonic. More than a single tablespoonful should not be taken without prior dilution.

**PRECAUTIONS:** Potassium is a major intracellular cation which plays a significant role in body physiology. The serum level of potassium is normally 3.8-5.0 mEq/liter. While the serum or plasma level is a poor indicator of total body stores, a plasma or serum level below 3.5 mEq/liter is considered to be indicative of hypokalemia.

The most common cause of hypokalemia is excessive loss of potassium in the urine. However, hypokalemia can also occur with vomiting, gastric drainage and diarrhea.

Usually a potassium deficiency can be corrected by oral administration of potassium supplements. With normal kidney function it is difficult to produce potassium intoxication by oral administration. However, potassium supplements must be administered with caution since usually the exact amount of the deficiency is not accurately known. Checks on the patient's clinical status and periodic E.K.G. and/or serum potassium levels should be made. High serum potassium levels may cause death by cardiac depression, arrhythmias or arrest.

In patients with hypokalemia who also have alkalosis and a chloride deficiency (hypokalemic hypochloremic alkalosis), there will be a requirement for chloride ions. TWIN-K is not recommended for use in these patients.

**ADVERSE REACTIONS:** Symptoms of potassium intoxication include paresthesias of the extremities, flaccid paralysis, listlessness, mental confusion, weakness and heaviness of the legs, fall in blood pressure, cardiac arrhythmias and heart block. Hyperkalemia may exhibit the following electrocardiographic abnormalities: disappearance of the P wave, widening and slurring of the QRS complex, changes of the ST segment and tall peaked T waves.

TWIN-K taken on an empty stomach in undiluted doses larger than 30 ml can produce gastric irritation with nausea, vomiting, diarrhea, and abdominal discomfort.

**OVERDOSAGE:** The administration of oral potassium supplements to persons with normal kidney function rarely causes serious hyperkalemia. However, if the renal excretory function is impaired potentially fatal hyperkalemia can result. It is important to note that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration with E.K.G. changes.

Treatment measures include:

1. Elimination of potassium containing drugs or foods.
2. Intravenous administration of 300 to 500 mEq of a 10% dextrose solution containing 10-20 units of crystalline insulin per 1000 milliliters.
3. Correction of acidosis.
4. Use of exchange resins or peritoneal dialysis.

In treating hyperkalemia it should be noted that patients stabilized on digitalis can develop digitalis toxicity when the serum potassium concentration is changed too rapidly.

**DOSAGE AND ADMINISTRATION:** The usual adult dosage is one tablespoonful (15 ml) in 6-8 fluid ounces of water or fruit juice,

two to four times a day. This will supply 40 to 80 mEq elemental potassium. The usual preventative dose of potassium 20 mEq per day while therapeutic doses range from 30 mEq to 100 mEq per day. Because of the potential for gastrointestinal irritation, undiluted large single doses (30 ml or more) or TWIN-K are to be avoided.

Deviations from this schedule may be indicated, since no average total daily dose can be defined, but must be governed by close observation for clinical effects.

**HOW SUPPLIED:** Pint bottles, NDC 0524-0021-16

**CAUTION:** Federal law prohibits dispensing without a prescription.

## SU-TON®

**DESCRIPTION:** Forty-five ml of SU-TON contains the following ingredients:

Pentylentetrazol . . . . .	30 m
Niacin . . . . .	50 m
Vitamin B-1 . . . . .	10 m
Vitamin B-2 . . . . .	5 m
Vitamin B-6 . . . . .	1 m
Vitamin B-12 . . . . .	3 mc
Choline . . . . .	100 m
Inositol . . . . .	50 m
Manganese (as Manganese Sulfate) . . . . .	1 m
Magnesium (as Magnesium Sulfate) . . . . .	2 m
Zinc (as Zinc Sulfate) . . . . .	1 m
Iron (as Ferric Pyrophosphate, Soluble) . . . . .	22 m
Alcohol . . . . .	18 m

**INDICATIONS AND USAGE:** SU-TON contains pentylentetrazol which may be helpful in the older patient as an anesthetic agent when mental confusion and memory defects are present. SU-TON also contains vitamins, trace minerals, and iron, for those patient who may benefit by preventing the development of a deficiency.

**CONTRAINDICATIONS:** Epilepsy, convulsive disorders or known history of sensitivity to any of the listed active ingredients.

**WARNINGS:** The safety of this preparation during pregnancy or lactation has not been established. Use of this drug requires the physician evaluate the potential benefits of the drug against any possible hazard to the mother and child.

**PRECAUTIONS:** Although there are no absolute contraindications to pentylentetrazol, it should be used with caution in epileptic patients or those known to have a low convulsant threshold or a focal brain lesion. Caution should be exercised when treating patients with high doses of SU-TON who have heart disease. While pentylentetrazol does not act directly on the myocardium, the results from central vagal stimulation could cause bradycardia.

**ADVERSE REACTIONS:** Pentylentetrazol in high doses may produce toxic symptoms typical of central nervous system stimulants, which act on the higher motor centers and the spinal cord. Convulsions resulting from this drug are spontaneous and are not induced by external stimuli. They usually last for several minutes and are followed by profound depression and respiratory paralysis. Death has been reported from the ingestion of 10 grams of pentylentetrazol.

**DRUG ABUSE:** Drug dependence has not been reported with SU-TON.

**OVERDOSAGE:** Signs and symptoms of acute overdose may be due principally from overstimulation of the central nervous system and from excessive vasodilatation with resulting autonomic nervous system imbalance. The symptoms may include the following: vomiting, agitation, tremors, hyperreflexia, sweating, confusion, hallucinations, headache, hyperpyrexia, tachycardia. Treatment consists of appropriate supportive measures. If signs and symptoms are not too severe and the patient is conscious, gastric evacuation may be accomplished by induction of emesis or gastric lavage.

Intensive care must be provided to maintain adequate circulation and respiratory exchange.

**DOSAGE AND ADMINISTRATION:** One tablespoonful (15 ml) 3 times a day 20-30 minutes before meals. This drug is not for use in children under 12 years of age.

**HOW SUPPLIED:** Bottles of 473 ml (16 fl oz) NDC 0524-0015-16

**CAUTION:** Federal law prohibits dispensing without a prescription.

## BUSINESS REPLY MAIL

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Postage will be paid by addressee

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Shreveport, Louisiana 71106  
Pioneers in medicine for the family

AP-001 5-80 Printed in U S A



# President's Message



C. A. Lightcap, M. D.  
*President*

## UNITY

No profession can compare to ours in unity of purpose: We are united, in a long and endless procession of physicians dating back to biblical times, in common cause against disease and human suffering.

In other callings, men may at some time in their lives doubt the purpose and objective of their God-given talent, energy and drive. We are spared this, as our predecessors were and our successors will be.

However, this unity, this fraternity of men and women against disease, sometimes fails many of us in the fight we have joined to preserve the purity of our profession in this single-minded and timeless battle.

Many among us say: "It is enough that I be a good doctor to my patients. I choose to leave the politics to others." Fortunately, not everyone believes that or our collective fight would have long ago been destroyed by forces constantly striving to divide and conquer us.

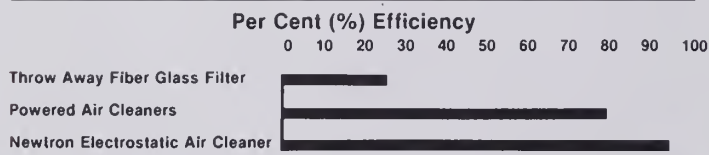
Fortunately for our profession, enough good men have joined shoulder to shoulder in their county societies, state associations and national organization to present a strong, united front against aggressors. If you are not among those willing to stand up for the survival of independent medicine and all that it has meant to mankind, then you are part of the problem.

C. A. Lightcap, M.D.

# Doctor, your patients will be asking about the Newtron® Electrostatic Air Cleaner.

And with good reason. The Newtron® electrostatic air cleaner is a revolutionary new device that allows allergy patients to breathe clean air in their homes and offices — at a much lower cost than has ever been possible before.

In fact, the Newtron® is the only reasonable answer to the problems caused by pollen, dust, smoke, and other air pollutants. It requires no electricity, never needs to be replaced, requires no maintenance other than a monthly rinsing with tap water, and comes in standard filter sizes to simply replace the existing throw-away filter in heating and air conditioning systems. Even more importantly, it far out-performs all other cleaners, including electrically powered models costing more than three times as much.



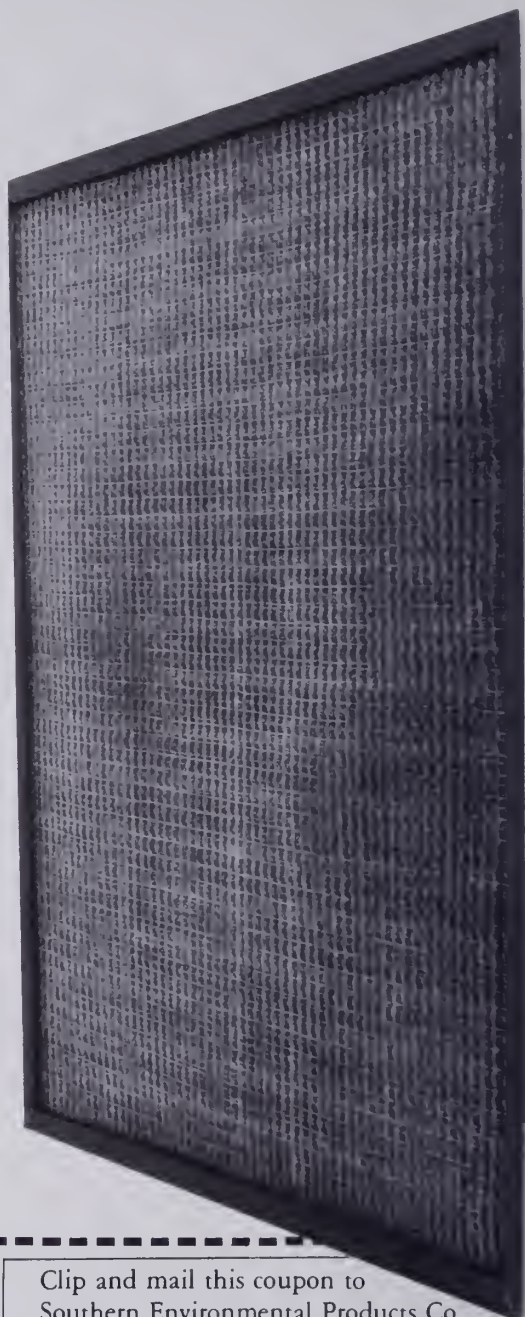
In the past, high costs and complicated installation have put truly clean air out of the reach of most allergy patients. Now that the Newtron® is available — and has been proven effective in hospitals, businesses, private homes, and apartments — your patients will be asking for your approval or opinion.

Please allow us to send you a complete information package on the Newtron®. No salesman will call, either in person or by telephone (unless you request it). The price of the Newtron® varies from \$180 to \$190, according to size. (Master Charge® and VISA® are accepted.) Professional discounts on Newtron® electrostatic air cleaners are available to physicians who wish to purchase one unit for their personal use.

## Newtron®

The ultimate air cleaner.

Newtron® is a registered trademark of Newtron Products Co., Cincinnati, Ohio  
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Specialty: \_\_\_\_\_



# Motivations In Murder

Claude L. Brown, M.D.\*

*The author attempts to categorize motivations of murder in thirty-five cases by the psychodynamic understanding of the meaning of the event. Four such categories are described, with examples given in two categories of persons who murdered more than once. Characteristics of the person prone to repetitive violence are described. Appropriate intervention, whether it be considered punishment and-or treatment, depends upon better understanding of the murder.*

Mankind has always been greatly interested in murder and has spent much thought and effort in both promoting and preventing it. Even a meager view of history shows our race well-splattered with blood. Murder is a familiar, vivid, and obviously highly destructive example of the immense influence of the irrational in our actions. I consider here murders (unlawful homicides) that are committed by individuals rather than by institutions.

Someone gives four reasons for murder: for money, for revenge, for passion and for no discernible reason. This statement contains some germs of truth but consider: even those murders caused ostensibly by desire for money, or revenge, or some kind of profit are apt to be quite irrationally motivated.

Plainly, most violence is unrealistic in that its processes are excessively destructive for any visible aim. Such violence is literally over-kill. A robber who kills a clerk for the money in his cash register is behaving irrationally. As physicians we would show little acumen to say that Mr. Smith has a fever because he is sick. Likewise we show no perception in saying that Mr. Smith is a murderer because he is crazy, or mean, or for any reason that comes from only a glance at the whole situation. Usually only in those murders in which we can see no rational purpose do we say that the act was predominantly a product of psychologically aberrant factors. However, I believe that the majority of murderers, even those with some apparently clear external gain, are irrational to some degree.

Although Coleridge showed a lack of psychological insight when he described Iago as the personification of "motiveless malignancy", most of the great portrayers of emotions make no such mistake. For instance: Verdi, writing to his librettist concerning Il Trovatore, was at pains to have Acuzena described as non-psychotic. He wished her to be seen as confused at times, troubled greatly in her emotions, but not devoid of judgement.

And in Othello (where Coleridge missed the point) Shakespeare, with marvelous insight and expressiveness, shows the Moor to retain some judgement even with the tremendous perturbation and ambivalence voiced in his soliloquy in the bedroom just before he murders Desdemona. Criminal behavior, like any other involved behavior, is a final pathway of a constellation of feelings, reactions, attitudes and conflicts rather than the simple mental operation of intending—not that this exists either. We try to grasp the totality of personality functioning, realizing that all actions have multiple determinants. Always there is the inextricable intermingl-

\*Principally engaged in the private practice of psychiatry in Mobile, Alabama, and Clinical Professor, Department of Psychiatry, School of Medicine, University of South Alabama.

ing of purpose, or personality integration and conflict, and the influence of external circumstance.

All classification and descriptions of objects, operations, and institutions tangible and intangible are inadequate or at least incomplete. Our efforts will falter whether we are classifying schizophrenia or lepidoptera. When considering that paradox, the human personality, we will surely not cover the vast range of the human spirit in action. This attempted classification is thus incomplete: the edges of the categories blur and intermingle, and other inadequacies may be present.

Concerning the cases that this study is based on: I do not assert that they are entirely representative or murderers as these are generally seen in a prison setting or in society at large. Each case was sent to me by some agent of the law because there was some question concerning the person's mental state. Thus there was some pre-selection.

The accompanying tables are self-explanatory: they will be referred to later.

I believe that behavioral manifestations of a coherent pattern of psychopathology can be seen in most murderers, and that this coherence can lead to a tentative categorization of the motivation of murderers as follows (examples are given only in the categories that includes multiple murders):

I. The murder is a temporary 'healing act' in a person of precarious emotional balance. The outstanding feature in these murderers is their marked intrapsychic

remorse, and since the enemy was felt only by his unconscious expresses no verbal hostility towards the victims.

The coalescing of processes that lead to murder may occur but once. It is probable, however, that recurrence is the rule since the inexorable personality distortion results from such early inflicted major trauma that they will continue to arouse cataclysmic anxiety.

Thirteen cases, thirty-seven percent, were in this category.

Example: Mr. A is a twenty-nine year old white married male who murdered four women. He is the youngest of four siblings; two older brothers were not significant to him, a sister seven years older was closer. The family was low middle class economically. Although obese until around six years of age he was thought sickly by the family. He had one convulsion in infancy, cause unknown. The father, an electrician, drank heavily, was denigrated by mother; a passive man, an object of contempt by the family, he died of cancer when Mr. A was twenty-two. The father was moved out of the parental bedroom at the time of A's birth and A slept with his mother until he was six, and then slept in another bed in the room with her until he was sixteen. He denies any sexual fantasies or acts involving his mother; he also denies ever having masturbated. Neither parent was physically abusive, but a grandmother with whom A stayed while his mother worked frequently made him stand for long periods in a corner and often whipped him for no clear reason. His mother was always extensively dominating of A. He was shy, had a few acquaintances but no real friends, made average grades in school, was not quarrelsome, had no special interests. At age twelve he was attacked by two girls who held him down and forced him at knife point to perform cunnilingus and threatened him with castration. He went home but there was no one to whom he could relate this disturbing event. At fifteen he was arrested three times for purse snatching. (In my experience, purse-snatching usually foreshadows greater violence. It is not just theft, but the aggressive tearing away of something valuable from a woman). Later that year he was charged with assault with intent to ravish but the case was dropped. At sixteen he was strongly suspected of the murder by shooting of an elderly woman. For lack of evidence he was not indicted but later he did not deny this murder. In 1965 while in the Air Force he impulsively and unprovokedly attacked and beat almost to death a WAF who was working alone in a building. He said that he somehow felt threatened by her. For this assault he was sentenced to prison where he made a poor adjustment for several years and was described as being hostile, resistant, uncooperative in any work or educational program. In 1971 he wrote a lewd threatening letter to a female teacher. He was considered by a prison psychiatrist in 1968 to urgently need long term psychiatric treatment; this was offered him but he refused. His behavior improved, his sentence was reduced and he was paroled

TABLE 1	TABLE 2
<b>35 CASES</b>	<b>AGE</b>
Male - 31 (88.5%)	1 Year to 10 Years - 0
Female - 4	10-20 - 5
<b>RACE</b>	20-30 - 14
White - 29 (82.8%)	30-40 - 7 = 71%
Black - 6	40-50 - 5
<b>VICTIMS</b>	50-60 - 3
54 (at least)	60-70 - 1

conflict causing great distortion of affect, with disorder of thinking, or incapacity in developing significantly rewarding relationships, or all of these.

In short, these people are psychotic or near psychotic, either chronically or episodically. The murder is a last hope defense against a more devastating attack upon the ego of the murderer: he kills to prevent what he unconsciously perceives to be his own imminent, stark annihilation. The act is an emergency measure to preclude further ego rupture. This process has been well delineated by others.(1) These murders are often incomprehensible to the public and may be atrocious and bizarre in their physical aspects. The victims, often women, may or may not be strangers. The murderer has little or no insight into his motivation, usually shows no





Perhaps no physician in Alabama history stirred up such enduring controversies as Josiah Nott, M.D., whose 1873 Mobile grave is examined here by Mrs. Terry Anderson, Assistant to Curator Sam Eichold, M.D., Heustis Medical Museum. Physician, surgeon, prolific author, thinker, ethnologist and peerless iconoclast, Dr. Nott had the entire nation in sharp debate in the years preceding the Civil War. An account of his life, work and the continuing controversy about him will be included in a special Mobile issue of the Journal planned for next winter.

# Motrin<sup>®</sup> vs codeine...

ibuprofen





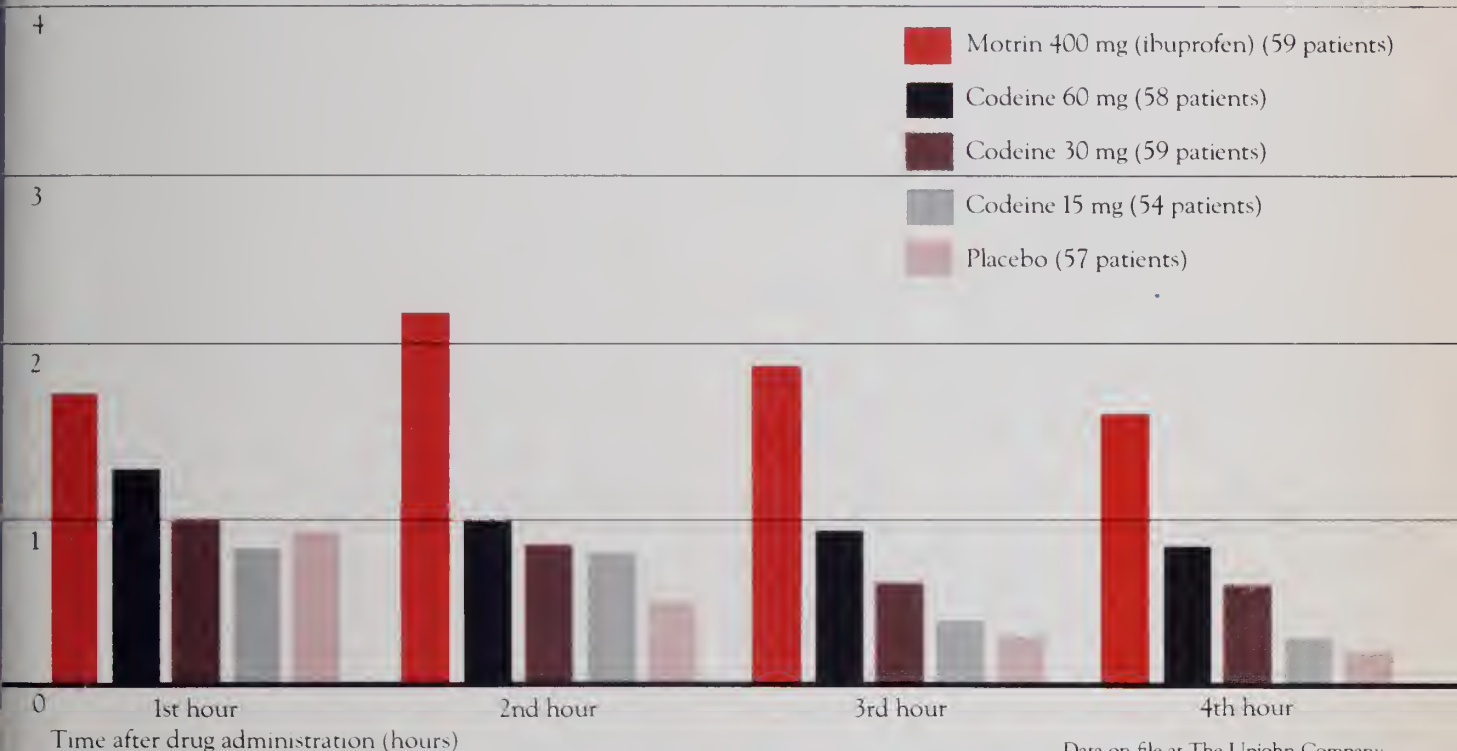
# compare the analgesic effect

Motrin (ibuprofen) 400 mg tablets provided greater relief of pain than codeine in a double-blind, randomized clinical study of 287 patients.

Motrin was significantly more effective ( $p < 0.01$ ) than codeine 60 mg at the 2-, 3- and 4-hour intervals...significantly more effective ( $p < 0.01$ ) than codeine 30 mg, codeine 15 mg, and placebo at all intervals.

## Degree of pain relief—mean scores

4 = Excellent relief   3 = Good relief   2 = Fair relief   1 = Poor relief   0 = No relief



One tablet q4-6h prn pain

A well-tolerated, nonnarcotic prescription for mild to moderate pain

**Motrin**<sup>®</sup> 400mg TABLETS  
ibuprofen, Upjohn

- Not a narcotic • Not addictive • Not habit forming • Acts peripherally
- Relieves pain rapidly • Indicated in acute and chronic pain • Well tolerated
- The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

**Upjohn**

**Motrin<sup>®</sup>** (ibuprofen)

# now proved an effective analgesic for mild to moderate pain

**Motrin<sup>®</sup> Tablets** (ibuprofen, Upjohn)

**Indications and Usage:** Relief of mild to moderate pain.

Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels.

**Coumarin:** Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

## Adverse Reactions

### *Incidence greater than 1%*

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,\* epigastric pain,\* heartburn,\* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,\* headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

\*Incidence 3% to 9%.

### *Incidence less than 1 in 100*

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

### *Causal relationship unknown*

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Rheumatoid arthritis and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

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MED B-4-S

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in 1973. He worked well in an industrial job, was seen in psychotherapy at a mental clinic until his case was closed in 1975. He attended the clinic only because it was a necessary condition of his parole.

He married a divorcee with four children in 1974; this was his first love affair and his first experience of sexual relations. They did not quarrel and he was apparently doing well until their first child was born. However, he once frightened his wife by asking her to write a suicide note which she did. He then began to choke her but stopped. She went to the police but preferred no charges and never left him. After his wife became pregnant his behavior changed: he became more withdrawn, tense, slept poorly, was disinterested in sex and had unpleasant head sensations. Just before their first child was born in 1975 he bought a pistol, supposedly for his wife's protection while he was at work. The first child was born in October, 1975 and after her birth his symptoms were exacerbated with epigastralgia and bad dreams. Five weeks later he entered a convenience store, beat the female clerk in the head, shot and killed her, and slashed her right leg. He continued to work regularly but all the above symptoms remained. In early April, 1976 his wife announced that she was again pregnant. Two weeks later he abducted a female clerk from a store, took her to the woods and shot and killed her. He extensively mutilated her body with a knife, amputating her breasts and placing them between her feet, slashing her genitals and thighs, and stabbing her body numerous times. His first child's birthday was in October, 1976. A small party was held in his home; he described the day as perhaps the best in his life. He drove his mother to her home after the party and on the way back, to his own home stopped at a convenience store. He there abducted a female clerk, took her to the woods, raped her in his car then shot and killed her. The next day he returned to the woods but left when he saw two hunters. The following day he returned and mutilated the body as he had done to his previous victim. He was arrested shortly afterward and admitted all these murders.

He is a tall slender man, slightly stoop shouldered, with long unkempt brown hair. He sometimes talks little, again he is more voluble. Always he is very tense with twitches of the face and hands and constantly shifting eyes. He has no explanation for the murders, denies that he was in any abnormal mental state prior to the murders, was under no drug influence and did not premeditate the murders. He knows that his actions were wrong but he displays no remorse and says that he has no concern for the victims or their families. He describes his sensations during all the acts relating to the murders as being detached, as if "seeing myself on T.V. or something". His intellect is normal as is his physical state. He shows no delusions, hallucinations or confusion.

The salient feature of psychological testing were: limited Rorschach responses with no form or color responses; abnormal sensitivity to probing into his personal history; confusion of sex and aggression; massive

provocation of anxiety when he perceives, however incorrectly, that his masculinity is threatened; denial, repression, and great expenditure of energy in controlling internal conflicts with resulting generalized inhibition of emotional expression; and very poor impulse moderation.

Here one clearly sees the irrational in action. An already impoverished ego and a distorted super-ego are further assailed by intense anxiety precipitated by unconscious conflict. Further disruption occurs with further impairment of reality testing and control, and the murderous elimination of the unconsciously threatening object occurs. A spasmodic equilibrium is restored, poorer than previously existed. The unconscious is replete with massive stresses; with such vulnerability threats are often present and repetitive disruptions, closer temporally and increasingly more primitively violent, take place.

## II. 'The Turning of the Worm'

In these cases the murderer is acting to ward off devastations threatened by loss of narcissistic supplies. This situation is far more common in men. Typically he is well acquainted with the victim, often a spouse or a friend. He is a stable, productive citizen; has no history

TABLE 3

### WHO WERE VICTIMS

—14 murderers (40%) killed total strangers—these victims totaled 28 persons (51.8% of the people killed)

—14 murderers (40%) killed a family member:

- 8 killed their wives (1 killed 2 wives)
- 2 killed their husbands
- 1 killed her mother
- 1 killed his father
- 1 killed both parents
- 1 killed his mother

16 victims, 30% of the total, were close relatives.

of aggressive behavior and shows no emotional derangement. He verbalizes much ambivalence towards the victim and displays appropriate grief and remorse. He shows self-effacement, inhibition of impulse expression, consistency and stability within a small world, and excessive dependency usually upon the victim.

In human beings there is but one workable situation based on unconditional love: the infant mother relationship. To carry this arrangement beyond its naturally transient state is to find frustration. The men in this category have made a pact with their victims (here their wives), a desperate treaty: 'at the price of emasculation I will stay with you forever, regardless of what you do, as long as you stay with me because only you can magically nourish me'. The intense wish-fulfilling fantasy that mother's milk will remain forever available, coupled with the fantasy that he has indeed possessed mother and has been appropriately castrated render him extremely vulnerable to final separation from this woman. It is she alone (mother) who has the only milk available as far as

he is aware, and having lost his penis he cannot expect to get another woman or to get any of the other benefits of assertiveness. So cleave he must to her and by any means available keep her with him. He believes with Keats, 'forever wilt thou love and she be fair', but Keats was referring to stone figures, and such a message is necessarily fatal to satisfactory human relationships. Sometimes it is fatal of life itself.

In these cases the murder, always by shooting, has several overlapping meanings. Among others, these meanings are:

A. That he will indeed prevent her from leaving him. The murderer's conscious feeling afterward is that he did not really kill her, that she is still alive, that he knows he did it but yet cannot believe it. The great ambivalence is seen in his intense yearning "to have her back like it was before". Although he knows that their union was miserable yet he still imagines ineffable rewards, somehow, in this situation. He regrets her loss and would have her back once more to participate with him in an alluring debacle. The ambivalence allows him to wish to remove her and to retain her simultaneously.

B. That he can act decisively with her but such major decisiveness is highly dangerous and to be undertaken only in this dire situation (the threat of her leaving).

C. That she, vital to him, is leaving thus he will die—so he makes her leave rather than passively allowing her to leave—killing her before she can kill him.

D. The choice of weapon is significant, for in shooting there is finally a profound penetration of her which he has heretofore never achieved.

E. He frees himself by drastic means from a ruinous process from which he cannot extricate himself by other methods. In this sense the murder is a triumph, a deliverance wrought by him: unconsciously bound he unconsciously breaks the bonds.

Seven cases, twenty percent of the total.

III. The murder is an expression of tremendous hostility towards life in the aggressive psychopathic personality. This murderer, usually male, often has a criminal record which begins in early adolescence or puberty. The victims may or may not be strangers and may be of either sex. The hostility towards the non-accepting world is a projection and generalization of the early infantile hostility/fear towards the non-nurturing mother. Here the hostility towards mother is usually consciously experienced and verbally expressed.

The murderer despises himself and all the world. He has tenuous positive bonds with anything or anyone; his few lasting personal relationships are intensely ambivalent and turbulent; he is life-denying, loveless and unloving. Since people exist as pseudo-objects only to satisfy his immediate needs and thus are not felt as truly human beings he can kill with no compunction. He is miserable, restless in his profound unhappiness. He brightens no face for his is never bright.

His corrosive hostility, usually externally directed, can be reflected towards himself. Although he rarely com-

mits suicide he frequently courts his own death by indirect means. When sentenced to death he is usually sincere if he urges his execution, for beneath any histrionic or manipulative processes there is the ubiquitous wish for death. Deprived of alloplastic expression he faces annihilation by his own overwhelming rage at his perception of himself as so unlovable, plus his rage at the consistent frustration of his endless attempts at taking from objects.

His principal and hostile identification is with his mother. Father never serves as an adequate identification figure. Father always is an adequate identification figure. Father always is relatively inaccessible due either to withdrawal into passivity, or by his formidably threatening role. Thus the murderer's masculine identity is always in serious question to him the complications pertaining thereto.<sup>(2)</sup>

He usually shows no formal psychotic processes although his projective defense may assume paranoid proportions at times. Since his major fixations and con-

## TABLE 4

### MULTIPLE MURDERERS

—8 (22.8%) killed 28 people (52% of the victims)

—6 of these 8 (17% of total cases) killed approximately 24 people (43% of victims), committing these murders at separate times

—2 of these 8 each killed 2 people on the same occasion

flits are in areas prior to the development of the super-ego, and the introjected objects are unremittingly negative there results a quite distorted super-ego and no formation of an ego ideal.<sup>(3)</sup>

One may speculate concerning the nature and timing of early trauma. It seems probable to me that the schizophrenic has experienced some substantial nurture, brief and fitful as it may have been, which nurture has then been unfavorably altered or which has become quite ambivalent. In contrast this type of psychopath has enjoyed every little true nurture at any time which leaves him to feel and act as if he is beyond hope. One exemplification: The psychopath almost never appears in the psychiatrist's office voluntarily and consistently seeking help<sup>(4)</sup> whereas such a guest is common in schizophrenics. The schizophrenic continues to hope for and often seek some favorable restructuring of his conflicts and defenses. For the psychopath the world has no nurture to offer and his meager gratifications have to be wrested from objects which are mere ghosts.

Ten cases, thirty-five percent of the total.

Example. Mr. B. is a thirty year old white male charged with the murders of a young man and woman. He accosted them while they were in a parked car on a dark road. He beat the man to death there, took the female with him a short distance in his car and then beat her to death. He admits these murders, saying in explanation



only that he was somehow offended by a remark made by the man. There is no remorse concerning the victims nor any interest in them at all. There is a long history of aggressive and delinquent behavior. He was arrested at age fifteen for theft and has been arrested numerous times for disorderly conduct and assault. He was arrested two years earlier for the murder of a woman in another city but was acquitted (he does not deny this murder). His several marriages have been unsatisfactory due to his hostility towards the wives. His first wife had a child by a previous marriage. He often beat this child and occasionally the wife because he felt that the mother paid more attention to the child than to him.

He has a younger brother and sister; his parents are healthy and have never separated. He always feared his father because of father's strength and the numerous whippings that father gave him. The younger brother was favored by both parents. He dislikes his mother feeling that she did not protect him enough from his father's savagery and that she often interfered with relations with other women in his life. He once had a fight with his mother in a police station; they were there because he had had a previous fight with his wife. He finished high school, served seven months in the military service and was discharged due to bad feet. He works regularly in construction jobs, uses no drugs and is physically healthy. He has no close friends, prefers to "chase women", and has no homosexual interest.

He is a well developed, neatly dressed man of good appearance. He is entirely clear mentally, of normal intelligence, articulate and frank. His verbalizations are almost exclusively concerned with his hostility towards women: the injustices they have done him, his inability to please them except in bed, their untrustworthiness and contentiousness. He elaborates pictures of his hostility both in his fantasied and realized acts. Often, he says, he seizes some pretext for becoming angry with a woman and then attacks her: "I act like an idiot when I get mad". He thinks that he is not as strong as many other men, and often experiences adversities from others thru no fault of his own. "Why do I make everybody hate me? I must have a rotten personality".

He does not think that his mind is affected in any way but urges his awareness of his marked instability. He is totally egocentric with no vestige of interest in anything except his own feelings, and these feelings usually are rage at the frustration he finds in his dealings with others.

#### IV. The Partially Intended

A. Those individuals often with backgrounds of crime or delinquency who murder in the process of some other crime. Obviously there is a similarity with the persons described in Category three but here I place those whose hostility is not so all-pervasive.

B. The less than fully intended murder.

Example: A man struck a three year old child because it would not stop crying. The child died of internal injuries. Clearly the murderer's action was an over-

response based on preexisting conflicts, but there was no fixed intent to kill the child.

Five cases, thirteen percent of the total.

Concerning diagnosis: Table five classifies these cases according to diagnosis. Many differences in diagnoses given psychiatric patients stem from differences in the training and experience of examiners, plus variations in the over-all world view and personality structures of the examiners. Another source of variance in diagnosis is the changing nature of symptomatic expression of psychopathology in the murder. Many chronically emotionally disturbed criminals show varying facets of their disturbance at different times. For instance: a man may appear predominantly psychopathic, later will be floridly psychotic, and again well appear depressed, detached and quiescent. Other factors which impair ego function including: chronic brain damage from trauma, poorly controlled seizures, chronic alcoholism and other causes; chronic pain; physical weakness from malnutrition plus repeated systemic infections; and habitual use of hallucinogenic drugs—these were involved in five of the cases.

I fortunately saw most of these cases within one month of their crime. As one would expect, the longer the interval between the crime and the examination the more difficult generally is adequate understanding of the situation. Repression, retrospective falsification of memory, affective alteration, conscious evasion, radical alteration of external realities these, plus the ineradicable defenses of denial and rationalization can blur the picture. It has been said (Osler?) that one feature of the practice of medicine is the endless collection of data;

**TABLE 5**

#### DIAGNOSTIC CLASSIFICATION

—Psychopath (anti-social personality) - 10 (28.5%)

- 1 with epilepsy
- 1 with epilepsy + drug abuse
- 1 with alcoholism
- 1 with alcoholism + chronic brain damage

—Schizophrenia - 12 (34%)

- 1 with dull intellect

—Borderline (schizoid, disorganized, all associated with alcoholism) - 3 (8.5%)

—Neurotic - 8 (23%)

- 2 with dull intellect, depression
- 1 with severe chronic anxiety
- 5 with passive-dependency, threatened by loss of object

—Preadolescent maladjustment - 1

—No psychiatric diagnosis - 1

certainly in these cases one seeks to collect all available data.

Of what use is such categorization?

Concerning the widely debated issue of the predicta-

bility of dangerousness: it is seen that sixty-seven percent of the cases are in either Categories One or Three. Also, seven of the eight multiple murderers are in either Categories One or Three. The exception is a man who killed his wife and her lover at the same time; he is in Category Two.

No discipline short of miraculous revelation can accurately foresee the concatenation of external stimuli that, fused with internal readiness, combine to produce violence. No person is at every given moment homicidal. His impulses will wax and wane, the activation of these impulses will ebb and flow; one must postulate an overflow of impulses joined with the multiple determinants of externalization of these impulses amalgamating in a manner that favors the expression of the homicidal act. Obviously such combination of factors will not happen frequently nor will it be of lengthy duration. A comparison may be made with lightning in a thunder storm: one sees the storm, knows that lightning may be forthcoming and even perceives the occasional flash. But the flash does not occur constantly nor can the precise moment of its occurrence be predicted. Such is the problem of predicting violence. One can usually see the stormy character, can realize that eruption can occur in such a setting, but the actual phenomenon of the explosion is not a constant process, always present for the duration of the person's life.

These cases indicate that the most repetitively dangerous people are assaultive psychopaths; and those persons with massive pre-oedipal conflicts involving poor differentiation from a threatening mother, failure to distinguish between appropriate sexual expression and aggression, incapacity for significant intimacy, and the expenditure of much energy in repression.

It is clear that the individual who murders more than once is highly apt to continue to murder. This apparently tautological statement is sometimes lost to the vision of those responsible for the discharge of prisoners. I believe that most persons in Categories One and Three are, by committing their first murder, predisposed towards more acts of violence. This speculation is not at all true with those in Category Two and is less relevant to

Category Four. A formerly accurate belief concerning the identity of the victims is no longer nearly as correct: that murderers usually kill relatives or close acquaintances. Table Three shows that forty percent of these murderers killed total strangers, and that these strangers total fifty-two percent of the victims. These findings may have some significance pertaining to the disposition of murderers; i.e., who to parole, when to parole, and what methods of intervention may be useful.

Always the ultimate threat to the murderer resides in his unconscious. However, in all cases except those in Category Three the victims pose some threat. This threat is felt by the murderer as further disruption of an already impaired psychic equilibrium. The violent explosion of the act represents a rupture of the ego with the unleashing of primitive rage aimed the threatening object. With the assaultive psychopath, however, his victims may be innocent of any threat to him and serve only as objects upon which aggression is indiscriminately vented.

Roughly, the formula is:

Categories One, Two and Four: 'I kill him lest I be killed'.

Category Three: 'I kill him lest I kill myself'.

Usually a comprehensive life history of a murderer plus a study of his personality structure, plus the facts of the crime will give an understanding of why the person murdered and produce a reasonably accurate indication of his potential for further violent behavior. We make many forays into the complexities of motivation: murder is often bewildering in its motivations. This is a small excursion into a large field that needs further exploration.

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## *The Uses of Solitude*

WALTER BAGEHOT (1826-1877)

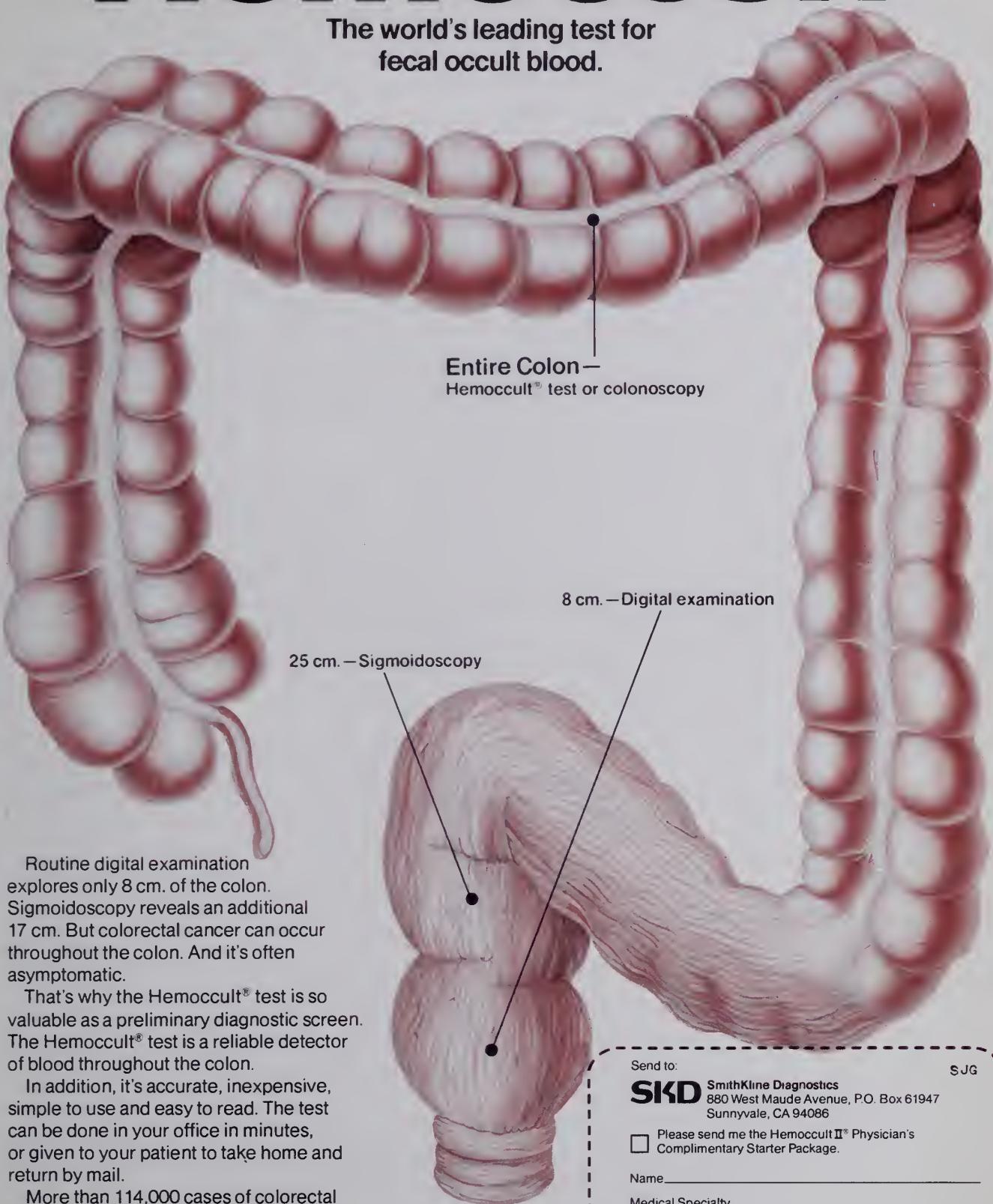
Pascal said that most of the evils of life arose from "man's being unable to sit still in a room"; and though I do not go that length, it is certain that we should have been a far wiser race than we are if we had been readier to sit quiet—we should have known much better the way in which it was best to act when we came to act. The rise of physical science, the first great body of practical truth provable to all men, exemplifies this in the plainest way. If it had not been for quiet people, who sat still and studied the sections of the cone, if other quiet people had not sat still and studied the theory of infinitesimals, or other quiet people had not sat still and worked out the doctrine of chances, the most "dreamy moonshine," as the purely practical mind would consider, of all human pursuits; if "idle star-gazers" had not watched long and carefully the motions of the heavenly bodies—our modern astronomy would have been impossible, and without our astronomy "our ships, our colonies, our seamen," all which makes modern life could not have existed. Ages of sedentary, quiet, thinking people were

required before that noisy existence began, and without those pale preliminary students it never could have been brought into being. And nine-tenths of modern science is in this respect the same: it is the produce of men whom their contemporaries thought dreamers—who were laughed at for caring for what did not concern them—who, as the proverb went, "walked into a well from looking at the stars"—who were believed to be useless, if anyone could be such. And the conclusion is plain that if there had been more such people, if the world had not laughed at those there were, if rather it had encouraged them, there would have been a great accumulation of proved science ages before there was. It was the irritable activity, the "wish to be doing something," that prevented it. Most men inherited a nature too eager and too restless to be quiet and find out things; and even worse—with their idle clamour they 'disturbed the brooding hen'; they would not let those be quiet who wished to be so, and out of whose calm thought much good might have come forth.



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# Perdiem™

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**INDICATION:** For relief of constipation.

**PATIENT WARNING:** Should not be used in the presence of undiagnosed abdominal pain. Frequent or prolonged use without the direction of a physician is not recommended. Such use may lead to laxative dependence.

**DIRECTIONS FOR USE—ADULTS:** Before breakfast and after the evening meal, one to two rounded teaspoonfuls of Perdiem™ granules should be placed in the mouth and swallowed with a full glass of warm or cold beverage. Perdiem™ granules should not be chewed. After Perdiem™ takes effect (usually after 24 hours, but possibly not before 36-48 hours), reduce the morning and evening doses to one rounded teaspoonful. Subsequent doses should be adjusted after adequate laxation is obtained.

**IN OBSTINATE CASES:** Perdiem™ may be taken more frequently up to two rounded teaspoonfuls every six hours.

**FOR PATIENTS HABITUATED TO STRONG PURGATIVES:** Two rounded teaspoonfuls of Perdiem™ in the morning and evening may be required along with half the usual dose of the purgative being used. The purgative should be discontinued as soon as possible and the dosage of Perdiem™ granules reduced when and if bowel tone shows lessened laxative dependence.

**FOR COLOSTOMY PATIENTS:** To ensure formed stools, give one to two rounded teaspoonfuls of Perdiem™ in the evening with warm liquid.

**DURING PREGNANCY:** Give one to two rounded teaspoonfuls each evening.

**FOR CLINICAL REGULATION:** For patients confined to bed, for those of inactive habits, and in the presence of cardiovascular disease where straining must be avoided, one rounded teaspoonful of Perdiem™ taken once or twice daily will provide regular bowel habits. Take with a full glass of water or beverage.

**FOR CHILDREN:** From age 7—11 years, give one rounded teaspoonful one to two times daily. From age 12 and older, give adult dosage.

**NOTE:** It is extremely important that Perdiem™ should be taken with a plentiful supply of liquid.

**HOW SUPPLIED:** Granules, 100 gram (3.5 oz) and 250 gram (8.8 oz) containers.

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From his lofty perch repairing the mast antenna (cover) Dr. Harry Pond can check on the work of his wife at the stern and an associate amidships. And such owner maintenance is a necessary part of joint-ownership, as Dr. Pond explains herein.

## Rime of the Modern Mariner: Joint Ownership

By Wm. H. McDonald

Harry Searing Pond III, M.D., believes he has found the answer to one of the frustrations associated with physician leisure: the temptation, often yielded to, to buy "a big expensive toy" and try to enjoy it enough to justify the cost.

No way, Dr. Pond has concluded, given the limited time the average doctor has for play. The toy becomes an albatross about his neck. Far better, Dr. Pond believes after considerable study of the problem, is to own the boat or plane jointly, time-sharing its use with partners.

This not only divides the initial cost and the never-ending maintenance, he says, but also gives just about enough use so that interest and enjoyment remain as fresh and new as the first dawn of Creation.

Dr. Pond, 41, shares the overhead and the fun of a 38-foot sailboat out of Fairhope with another

physician and an attorney. Details and philosophy of The Pond Principle follow:

Your partners in the boat, plane, must be congenial, considerate and as dedicated as you to the ideals of joint ownership. They must understand that the boat is theirs only when it is scheduled to be; that they never ask for time changes except in the most desperate of circumstances; and they must take care of the boat as if it were exclusively their own—which it is, when they have it.

Every major detail of the agreement should be committed to a written understanding, or contract, that provides for virtually every contingency.

Following are some of the actual provisions in the agreement between Dr. Pond and his two partners in the ownership of *The Shearwater*:

- All expenses incurred sub-

sequent to June 1, 1978, shall be borne by each owner in proportion to his ownership.

- If any of the owners wish to add equipment to the boat, but the others do not, the equipment would be available to all the parties; but would belong to the party who purchased it in the event of dissolution.

- If any of the owners wish to sell their interest in the boat, they will first offer that interest to the other owners at the purchase price . . . . Such offer will remain open for a period of 30 days; thereafter, and if the other parties have not agreed to the purchase, the selling partner may place his interest in the open market.

- If any of the owners wish to purchase an additional portion of the boat, they will offer to the other parties such amount as they deem fair. If, within 30 days, the other owners

have not agreed to sell the interest offered, they may purchase from the original, offering partner, the amount of interest in the boat, for the price at which the initial offer was made, and the original offerer will be required to sell under these circumstances.

- By separate agreement, the owners make arrangement for the specific time of use of the boat among themselves.

- Any breakage or damage beyond wear and tear, not covered by insurance, is to be repaired at the expensive expense of the owner who has control of the boat at the time of the damage. Any normal wear and tear involving routine maintenance, ordinary engine maintenance and the like, not due to misuse of or other accident, will be borne by the owners in proportion to their ownership.

- None of the owners shall permit any person, other than themselves, to skipper the *Shearwater* . . . during the period when he has use of the vessel. . . .

Well into his teens, young Harry Pond was under some parental pressure to choose between medicine and business. His father, who had to restart his business after being mustered out following World War II, wanted his son to join him. His mother, a physician, favored medicine.

The family had moved from New Orleans to Montrose, Baldwin County, after the war so his father could make use of a piece of family property, first given as a wedding present in 1858. Educated in Fairhope schools, Harry went off to Tulane at 17 not knowing what he wanted to do. His father was in the business of manufacturing butane cylinders and wanted his son to join him.

Medicine eventually won the tug of war, and Harry Pond, M.D., left Tulane to do a stint in the Indian Health Service in lieu of service in Vietnam, "learned the business of urology at Johns Hopkins," where he also won the American Urological Association first prize in re-

search for 1970. He then returned to New Orleans' famed Ochsner Clinic where he remained until called to join the Mobile Urology Group in late 1974.

Three years ago he was prime mover in the production of a widely acclaimed film about the dangers of shallow water diving, *The Story of Jay*, prints of which are still being circulated over the state.

Dr. Pond was touched by the story of the real life Jay, Jay Barnett, who had broken his neck diving in Mobile Bay. The 15-minute film about the tragedy of his quadriplegia was designed for a teenage audience.

To raise money for the film, Dr. Pond went begging around Mobile, collecting a few bucks here, a hundred or so there, from banks, industry, foundations and individuals. On a shoestring budget of \$5,000, and with the labor of love of two



**Sue Pond became expert at this at home—untying children's shoe laces.**

Spring Hill college communications teachers, specialists in film making, the warm and touching *Story of Jay* was produced on sheer guts.

Although he had given the story line its form and subject, Dr. Pond became the "tote & fetch guy" during the actual filming.

It was one of those rare happenings that "just kind of jelled," as he says, and might never come together again in anything approaching the success of the *Story of Jay*.

"I wouldn't try it again," Dr. Pond says. "If I did, I know it would ball up."

A footnote to the real-life story of Jay Barnett is that, perhaps inspired by the film, he went on to get married and now works as a bank computer programmer.

"This might have happened anyway," Dr. Pond says, "because Jay had a lot of inner resources. But I think the attention he got in the film might have boosted him along, giving him a sense of purpose."

(Prints of the film, incidentally, may be purchased from Pan American Films, 822 North Rampart Street, New Orleans.)

Sailing is a part of Pond family life. Mrs. Pond (the former Sue Caldwell of Shreveport, La. They met in college) told during a recent sail how, at first, she hated trying to stand on an angled deck under full sail. Then she got her sea legs and now loves riding the wind as much as her husband.

The leisure activity has had varied effects on their three children—Harry, 16; Ashton 15; and Alice, 10. Harry became a good sailor but is now working; Ashton favors team sports; Alice, the youngest, loves it only when she can take friends along.

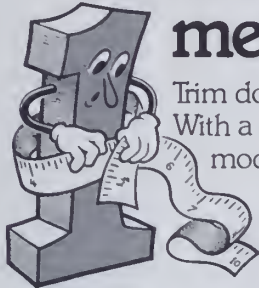
One of Dr. Pond's best remembered sailing trips was one he took to New Orleans. Let him tell it:

"On our way back we had headwinds for four straight days. It was blowing real hard and we had to get back. With us was a friend, who played ball for Bud Wilkerson and now teaches heart surgery at the



# 7 ways to feel good and live longer

## Does your figure measure up?



Trim down your excess weight. With a sensible diet. And regular, moderate exercise.

## What's for breakfast?

It's the most important meal of the day. Don't miss it.



## Do you work on balanced meals?

Your body needs three squares a day, balanced from the four food groups.



## Where do you draw the line?

If you drink, stop. Or at least cut back. Studies show that people

who don't drink or drink only in moderation live longer.

## Have you kicked the habit yet?

Smoking greatly increases your chances of cancer, heart disease and emphysema. Stop while you're ahead.

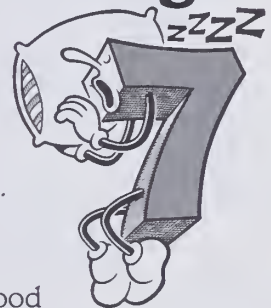


## Are you skipping exercise?

Don't. Moderate exercise about three times a week can make you feel better.

## Do you get enough shuteye?

Most people do need seven to eight hours a night. Give body and mind the rest they need.



Our coverage can take good care of you if you get sick. And that's a good feeling. But the healthier people are, the easier it will be to keep health care costs within reasonable bounds. For all of us.

These seven steps to better health have been proven to make a difference. The more of them you follow — consistently — the better your chances of living a longer, healthier life.

And the better you'll feel.

Blue Cross and Blue Shield wants you to feel good.



Blue Cross  
Blue Shield  
of Alabama

University of Oklahoma. He had to fly back to Oklahoma and I had to be get back to work in Mobile.

"Then, off Pascagoula, both working jib and big Genoa (sails to the non-nautical) blew out their seams and weren't functional. We were virtually without power in the middle of the Mississippi Sound.

"Our options were to turn off and put the boat in at Pascagoula or get the sails fixed somehow. Now Ron is a pretty crackerjack heart surgeon but no sailor. Then his wife came down below and produced one of

these button sew-on kits she had stolen from a New Orleans hotel room.

"As it happened, we had the right kind of thread aboard. The heart surgeon and his wife spent about two hours patching up those sails. He had never seen a set of sails before but as she punched holes with some of those little scissors, he would push the needle through and sew.

"After two or three hours, they had those sails fixed and we limped back home. The boat, meantime, was

wallowing around in the middle of the Sound, and I was trying to hold it where it was. I called Charlie Rutherford (Charles L. Rutherford, Jr., M. D.) on the phone (radio, of course), to talk over the next day's surgical schedule with him. I had expected to be back in Mobile by 6 that night, but it was then 4 in the afternoon and we were a long way from home. I told him I might be a little late. It was 3 the next morning before we got in."

There is no record that the heart surgeon ever asked for another sailing trip with the Ponds.



**Dr. Pond recycles a medical disposable, aloft, for which a perforated turkey baster serves nicely as a shower head.**



# 76th CONGRESS IN MEDICAL EDUCATION

A Report by George D. Oetting,  
Ed.D.  
Director of Education

The Congress of Medical Education has finally become civilized. No longer need attendees suffer frigid February meeting dates during which some dubious record is broken for the coldest—in the history of Chicago.

It now convenes in late April, and this year's gathering included the Drs. Ted and Margaret Klapper, John Packard and David Haigler from Birmingham; C. Neal Canup from Anniston Silas Grant of Huntsville. We arrived on the 22nd with the temperature in the 90's; the next morning I looked out the window to see snow falling! (It didn't last, but Chicago had to remind us of bygone days.)

## Congress Theme

"The 1980's will be a time to soar with the eagles, but it won't be if we act like turkeys."—Theodore Cooper, M.D., Dean Cornell University Medical College.

This year's meeting focused on the new decade, particularly the current dilemma of medical education and licensure. Over 500 medical educators attended this informative gathering, jointly sponsored by the AMA, the Association for Hospital Medical Education and the Federation of State Medical Boards. As usual I will be able to only hit a few highlights:

## Being Sunsetted in Florida

"Going through the Sunset process is like having an autopsy performed on you while you're still alive."—Michael Schwartz, Former Legal Counsel Florida Board of Medical Examiners.

One whole afternoon session was devoted to a fascinating commentary on the 1979 total reorganization of all Florida regulatory boards in-

cluding the Board of Medical Examiners. State politicians, staffers, current and past M.D. Board members, lawyers, consumer advocates—all had a chance to present diverse viewpoints on the effects of the recent sunset legislation which abolished all existing licensing boards, and required brand new legislation to recreate them.

What has emerged is a sort of super board, the Florida Department of Professional Regulation, headed by a powerful "civilian" Secretary, Nancy Wittenberg. All regulatory board investigators have been pooled in this department. If an investigation results in a hearing for an M.D., accused of some sort of misconduct, the hearing officer is an administrative lawyer who functions very much like a military summary court officer—being both the judge and jury. The hearing officer's recommendation is forward to the reconstituted Board of Medical Examiners for final disposition. But even the Board's decision can be vetoed by Secretary Wittenberg.

One Florida state legislator felt this sunset act was the "best piece of state legislation in the past 10 years." It forced everyone to start at a "0" point, and proved to be a valuable educational process. As a legislative staffer noted, there had been a great lack of communication between the Board of Medical Examiners and the state legislators, particularly in differing perspectives on their roles and functions. The agonizing reappraisal during the Sunset hearings helped to improve communication and provide better direction for the new Board.

Many speakers pointed to the need for medical examiners boards to tell the public, state legislators and everyone else what they are doing; people should know the tremendous time and effort expended

by the boards in protecting the public interest. As Secretary Wittenberg noted, "If you don't toot your own horn, it will get stolen."

Patsy Palmer, a militant Public Ombudsman for the Florida Legislature, advocated saving medical consumer costs by eliminating rules and regulations designed to restrict competition and make more money for a particular professional group. She rejected the idea that only professionals can regulate themselves, maintaining that citizens can do much of this; she felt that 50% or more on the Board of Medical Examiners should be non-M.D.'s.

Competition in the medical care field should be opened up, so that many more should be allowed to perform medical functions. These, she claims, should not be the exclusive right of physicians.

Physician commentary on this new set-up seemed to be restrained, sort of waiting for a bit to see how the process actually works over a number of months. The one new requirement that seems to really irk Florida physicians is the mandate that they must post a sign in their offices telling patients about a toll free number to call, if they have any complaints about medical care received.

Keynote speaker, Dr. Donald Kennedy, Stanford Provost, recommended that medical education be given much broader perspective. Too much emphasis, he maintains, has been placed on narrow specialties, and expensive intervention techniques which have not really done much to improve the general state of health. A greater concern for preventive medicine, the effective use of medical statistics, and analyses of population-based medical problems should be the major direction of medical education.

## Soft and Hard Medical Education

"Patients evaluate doctors on their attitude not their medical competence."

Norman Cousins

Literary expert, and now UCLA School of Medicine lecturer Cousins concentrated his remarks on the physician-patient relationship. Noting that most medical students perceive their studies in the behavioral sciences and preventive medicine as "soft" or extraneous while the "hard" sciences are really the important stuff; he asked the attendees to reflect on which was really the most important in actual medical practice.

The human elements in this relationship, the need to develop a cooperative physician-patient partnership in a truthful, trusting manner—these, claims Cousins are the really important things in conquering an illness.

## Physician Education Too Specialized

In this same vein, William D. Holden, M.D., Chairman of the National Board of Medical Examiners decried the ever increasing pressures to specialize too early and too narrowly in medical education. The specialty dominated departments in teaching hospitals and the structuring of resident programs to pass specialty boards have caused much of this problem.

Physicians require, he felt, a much broader clinical education prior to specialization. This could be accomplished in a "comprehensive residency" during the first year of residency work. (A concern, I have heard expressed frequently at recent national education meetings. Many feel that M.D.'s entering practice today have not had sufficient training in all clinical areas needed by physicians, regardless of ultimate specialization.)

## American Medical Students Studying Abroad

"Students are required to find their own patients to bring to class, and failing to bring in a patient may

result in failing the course."

Henry Cramblett, M. D., Dean,  
Ohio State College of Medicine.

The sorry state of many foreign medical schools, created in the 1970's to attract American dollars, was detailed by Dr. Cramblett. At present, thousands of American students, who failed to be selected for American Medical Schools, are paying high tuition fees at a number of proprietary "medical Schools" in Mexico, the Dominican Republic and several Caribbean Islands.

What most enrollees have found are poor living facilities, little scientific equipment or labs, an ill-prepared faculty, and empty libraries; at one school there was "one microscope and one weathered cadaver for every ten students." He cited many other "horror stories" of programs conceived primarily to get Yankee dollars, not produce competent physicians. The inadequacy of training is evident in the high failure rate of such American students on the ECFMG. In 1979, of the 3150 who took the exam only 39% passed.

He urged state boards to be very circumspect in licensing these graduates, and felt more should be done at the national level in formally examining these programs.

## Governmental Regulation of Medicine

"The Federal Register rather than medical journals is setting medical policies." Newton Minnow, AMA Legal Council.

Mr. Minnow, a veteran of many legal battles with the Feds of health policies and legislation did a good job of putting Federal actions into some sort of perspective. Prior to about 1965, he related, most governmental regulation dealt the safety and welfare of patients.

However, as Uncle Sam paid more and more of the medical bills, pressures increased to control medical costs. Cost reduction, he predicts will be the major governmental concern in the 1980's and 90's.

Unfortunately, there is a dichotomy among Federal agencies

as to how best to achieve these savings. One faction feels more regulation, health planning, review and control of physician and hospital actions, etc. is the route to go. Unfortunately, he notes this is often done by Congress enacting a vague law, left to interpretation and administration by medical bureaucrats.

Another faction, particularly the FTC, feels that medical costs are best reduced by free competition on the open market, using restraint of trade laws as the big club. The ridiculous degree this idea can go to was the court battle where the FTC maintained that no M.D.'s should participate in the accreditation of medical schools since doctors have a vested interest in holding down enrollments to reduce competition. Minnow, acting for the AMA in this case, wryly observed that it appears then that "ignorance is the principle qualification to be on an accreditation committee." (The AMA won this case.)

Self-regulation by medical providers may be one solution to excessive governmental interference, he feels, but it will only work if physicians get a lot tougher with themselves. At present, credibility in this area is very low.

## Malpractice Litigation on the Increase

"Because of malpractice—the goal has become the protection of the health care provider, not the health of the patient." Geoffrey Segar, Indianapolis Lawyer.

The legislation passed in the 70's has not solved the malpractice problem, and litigation is on the upswing again, observes Mr. Segar, a lawyer with much malpractice experience. (This same upward trend was noted by A. Derrill Crowe, M.D., President of Mutual Assurance Society in his 1980 report to the MASA Annual Session.) Risk management education programs, are in Segar's opinion, a positive step in the right direction.

I hope these comments will give you some idea of what was discussed at the Congress—a useful annual forum on medical education.



# DEAN'S REPORT

## UAH-HUNTSVILLE HOSPITAL FAMILY PRACTICE RESIDENCY

Colin Campbell, M.D.

Dean, UAH School of Primary Medical Care

When the state's first family practice resident entered the UAH-Huntsville Hospital combined program in November 1973, a family practice resident was an unknown quantity not only in Alabama, but in many other areas of the country as well.

From 1973 to 1980, the number of family practice residency programs has increased from one to ten in Alabama and from 164 to over 370 nationally. What distinguishes the residency program of the UAH School of Primary Medical Care now is not so much its string of "firsts," though these are worth noting: first approved family practice residency in the state, first to graduate a resident, first and so far the only family practice residency in the state to be fully accredited by the Liaison Committee on Graduate Medical Education.

What is more important for the present and future provision of health care in Alabama is how the Huntsville residency curriculum is structured to train family physicians who will help to meet this state's primary care needs.

### Oklahoma Model

Our initial residency program was based on the Oklahoma model developed by Dr. Roger Lienke, who became the first director of the UAH-Huntsville Hospital Family Practice Residency Program in January 1973. Several years later, it had become apparent that while the Oklahoma model got us off to a sound start, it did not fit all our purposes or the particular circumstances under which our program operates.

In developing the present residency curriculum, Dr. Herbert T. Smith, SPMC Chief of Family Medicine Programs, and our family medicine faculty visited 25 other family practice residencies and discussed with our residents and graduates on numerous occasions the best means of achieving our objectives. Major contributions to the residency curriculum have been

made by Dr. Richard A. Brown and Dr. Charles T. Moss, Jr., former directors of the residency; Dr. Michael J. McCarthy, Assistant Director of the residency; and Dr. G. Gayle Stephens, first Dean of the UAH School of Primary Medical Care and now Chairman of the Department of Family Practice of the University of Alabama School of Medicine.

### Well Rounded

One overriding goal has shaped the Huntsville residency program from the start: to train family physicians for rural practice. We are aware that not all our graduated residents will in fact practice in rural sites, though most do (Figure 1). But a physician trained for practice in a rural area, where he or she must be prepared to serve as primary care physician, part-time specialist, and emergency service, also will be competent and at ease in more densely populated areas where specialty secondary and tertiary care and back-up facilities may be readily available. At every stage of its evolution, the residency curriculum has been intended to produce family physicians who will serve their patients well in any type of community or practice organization.

In designing a curriculum to implement the program's philosophy, the family medicine faculty of the UAH School of Primary Medical Care has had to recognize and work within the following conditions:

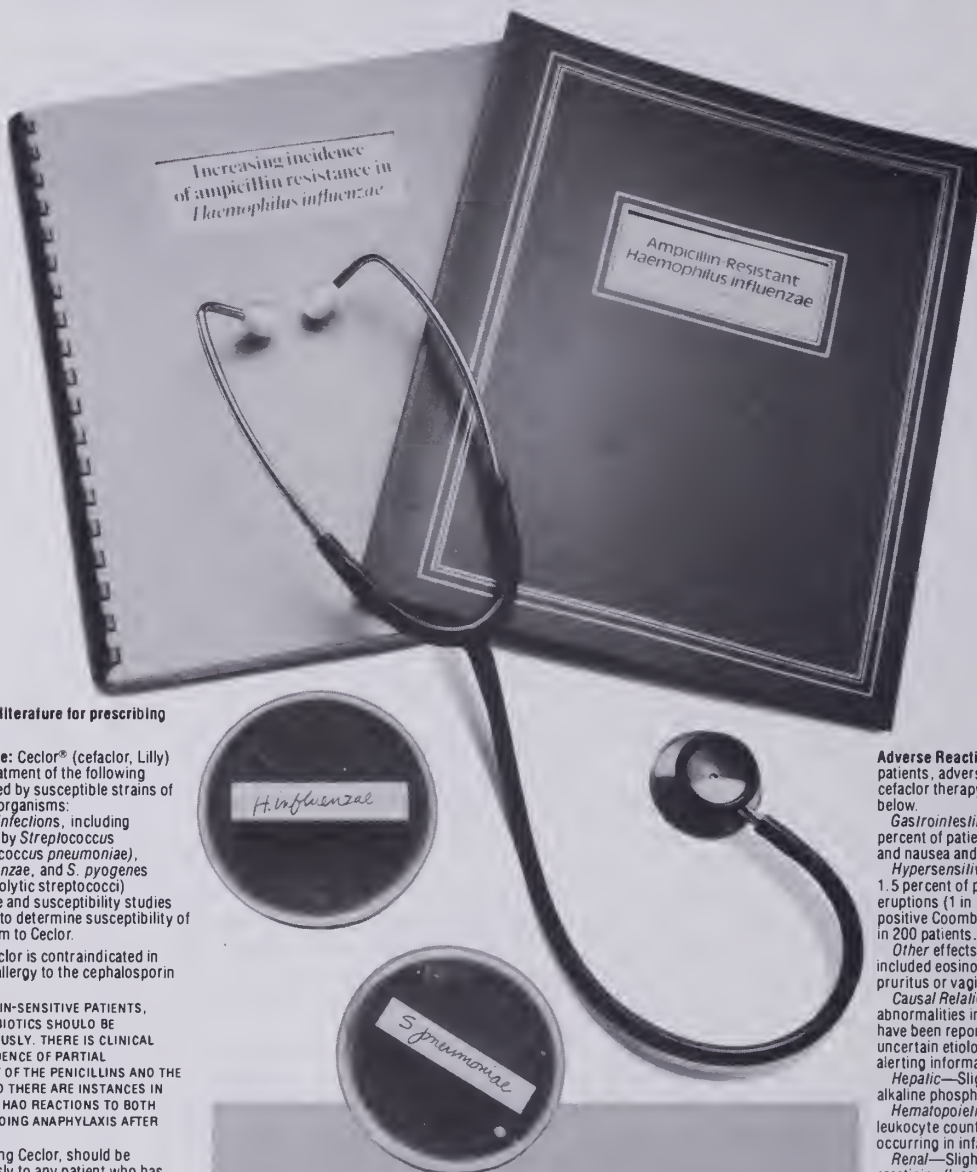
1. The UAH-Huntsville Hospital Family Practice Residency Program is the first and so far the only physician residency program in Huntsville, or indeed in northern Alabama. Huntsville Hospital, which serves as the program's main teaching hospital, has had to incorporate its first medical residents into its day-to-day operation during the same years that the hospital has been expanding to become a regional medical referral center serving northern Alabama and south-central Tennessee. In-patient ser-

vice responsibilities for residents have had to be developed or shared with the hospital medical staff. Thanks to their active cooperation and assistance and that of the hospital administration and nursing staff, the residents' inpatient experiences generally are meeting everyone's expectations. All patients admitted to the medicine, obstetrics, or pediatrics services at Huntsville Hospital who do not have their own physician are assigned to our family practice residents, who care for them under the supervision of the SPMC faculty.

2. All family practice residency programs are required by the LCGME to provide an ambulatory patient population for their residents that consistently includes a variety of ailments, ages, occupations, and economic levels. These patients are to be seen by the residents in settings and practice conditions that approximate as closely as possible those of private office practice. Because the UAH School of Primary Medical Care emphasizes training family practice residents for rural practice, our residents learn to utilize an unusually full range of medical specialties and ancillary professional services. This is not as paradoxical as it may sound. Because the rural family doctor is often called upon for a wide spectrum of patient care services, it is of utmost importance that he or she know his own limits and be prepared to use the resources available to provide what he may not be equipped to do.

Thus the UAH Ambulatory Care Center, which opened five years ago, has an educational program evaluator, a social worker, a specialist in developmental learning, a patient educator, and a nutritionist, in addition to patient care services in family practice, internal medicine, pediatrics, obstetrics/gynecology, and psychiatry. Part-time faculty are readily available to provide consultations in dermatology, neurology, surgery, and surgical specialties. The facility also has a computerized

# An added complication... in the treatment of bacterial bronchitis\*



**Brief Summary.**  
Consult the package literature for prescribing information.

**Indications and Usage:** Cefclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

**Lower respiratory infections,** including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci). Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cefclor.

**Contraindication:** Cefclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

**Warnings:** IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS TO BOTH DRUG CLASSES (INCLUDING ANAPHYLAXIS AFTER PARENTERAL USE).

Antibiotics, including Cefclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

**Precautions:** If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Cefclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

**Usage in Pregnancy—**Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

**Usage in Infancy—**Safety of this product for use in infants less than one month of age has not been established.

## Some ampicillin-resistant strains of *Haemophilus influenzae*—a recognized complication of bacterial bronchitis\*—are sensitive to treatment with Cefclor.<sup>1-6</sup>

In clinical trials, patients with bacterial bronchitis due to susceptible strains of *Streptococcus pneumoniae*, *H. influenzae*, *S. pyogenes* (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Cefclor.<sup>7</sup>

# Cefclor®

## cefaclor

Pulvules®, 250 and 500 mg

**Adverse Reactions:** In clinical studies in 1493 patients, adverse effects considered related to cefaclor therapy were uncommon and are listed below.

**Gastrointestinal** symptoms occurred in about 2.5 percent of patients and included diarrhea (1 in 70) and nausea and vomiting (1 in 90).

**Hypersensitivity** reactions were reported in about 1.5 percent of patients and included morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occurred in less than 1 in 200 patients.

**Other effects** considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

**Causal Relationship Uncertain—**Transitory abnormalities in clinical laboratory tests results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

**Hepatic—**Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

**Hematopoietic—**Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

**Renal—**Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[070379R]

\*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.

**Note:** Cefclor® (cefaclor) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285  
Eli Lilly Industries, Inc.  
Carolina, Puerto Rico 00630



medical record and business information system and a full-scale radiographic unit and clinical laboratory.

3. This integrated ambulatory patient care system must generate a "critical mass" of paying patients every month in order to remain operational. We have assumed that state funding could not support more than about half of our ambulatory operation and that federal grant support would decrease. Because the UAH Ambulatory Care Center must be as self-sufficient as possible and our family practice patients must encompass a broad range of backgrounds and health conditions, our income-producing patients must constitute a solid majority of our total ambulatory patient population.

### 80% Ambulatory

Within these constraints imposed by site, national requirements, and the school's modest financial expectations, Dr. Smith, the program's directors, and the family medicine faculty have developed those curriculum components that they judged were required by the school's emphasis on educating for rural practice. Indications are that rural practice is about 80% ambulatory care and 20% hospital care.

Therefore the SPMC program aims to make available to each resident a sufficiently representative range of patients and enough time spent as the primary care physician to assure that each resident will encounter most of the health conditions found in private practices, particularly in rural areas.

A resident entering the UAH-Huntsville Hospital program joins one of the four family practice "modules" in the UAH Ambulatory Care Center and functions as a member of a group practice till he or she finishes the program. Each module has one or two family practice faculty members, residents at each level of the program, and its own nursing and clerical support staff.

At the start of the first year, each resident is assigned 60 to 75 families as a beginning practice; by the end of the third year, the practice includes 180 to 200 families. Resi-

dents begin their three-year program seeing from four to eight patients one-half day per week in their module and progress to six to fifteen patients per half-day nearly full-time for parts of the third year (Figure II).

All residents in the Huntsville program are trained in the major medical specialties (Figure II) regardless of possible personal preferences to spend more time in certain specialties to the exclusion of other disciplines needed by the rural family physician.

Physicians preparing for rural practice learn that for their future patients, traveling to urban medical centers is not only time-consuming (in emergencies, prohibitively so), but costly. Staying in hotels, eating out in restaurants—these are added costs of secondary or tertiary care for rural patients and their families that will often cause them to put added pressure on their family doctor to treat them himself.

Unlike the traditional programs in which each year constitutes a level of training, our residency is divided into two roughly equal phases. The first year is similar to a rotating internship, with three months each on medicine, pediatrics, obstetrics/gynecology, and surgery. The medicine rotation is an intensive in-hospital experience. The pediatrics rotation consists of one month each of office pediatrics, inpatient ward pediatrics, and high-risk nursery experience. Obstetrics/gynecology, while basically a hospital rotation, also includes activities in the Madison County Health Department Prenatal Clinic, community family planning clinics, and ambulatory experience in the obstetrics/gynecology module in the Ambulatory Care Center. Surgery is two months of general surgery and one month in the Huntsville Hospital Emergency Room. The remaining Phase I rotations include one month each of neurology, orthopedics, gastroenterology, cardiology, and second-year pediatrics. There is also a two-month block of general internal medicine during which the residents have some teaching and supervisory responsibilities for first-year residents.

The second half of the residency is spent mainly in family practice. The residents continue to have

some time each week gaining experience in the ambulatory aspects of ENT, ophthalmology, dermatology, and radiology. Psychiatry is part of the first two-month block spent on family practice in the second year. The residents spend three half-days seeing ambulatory psychiatric patients and following certain family practice patients with emotional problems.

The other major part of Phase II is five months of electives. Many of our residents use three months of this additional time for advanced work in obstetrics and gynecology so that they will qualify for obstetrics privileges according to the ACOG/AAFP requirements. Most of our residents go into practice with sufficient experience to allow them to perform cesarean sections, tubal ligations, and D. and C.'s—surgical procedures that in rural practice often cannot be postponed for transfer to specialist care.

### Preceptors

Above all, we feel it is essential that our residents have exposure to rural patients and rural practice. All residents spend two months working with a board-certified family physician in one of several small communities in northern Alabama. Currently our residents take their rural preceptorship in either Red Bay, in the northwestern corner of the state, or Stevenson/Bridgeport, in the northeastern corner. The preceptor in Stevenson is a graduate of our program who has hospital privileges in North Jackson County Hospital in Bridgeport. In Red Bay, the preceptors are three young family physicians practicing together, two of whom originally came to Red Bay with the National Health Service Corps. The third is one of our graduates who did his preceptorship in Red Bay and returned after graduation to join his preceptors' practice. Our residents also see a large number of patients at the Ambulatory Care Center, which averages about 30% rural patients, and at Huntsville Hospital, which draws heavily from rural populations across northern Alabama.

More curriculum time is required in certain specialties in order to prepare the residents for the greater incidence of certain health problems

in rural areas. Because of the rate of accidents among rural populations and the distance from hospital emergency rooms, all our residents have an orthopedics conference every two weeks throughout their second and third years in addition to a month each of emergency medicine in their first year and orthopedics in their second year.

Practice Management

Among other conferences held regularly (Figure III) are the family medicine clinical conference, family practice grand rounds, and the practice management course, which the graduates practicing in small towns, particularly those in solo practice, have found invaluable. All medical practice requires good business management, but rural practice can have its own economic constraints, resulting from less cash flow and the lack of mechanized equipment that can be used to help run city practices efficiently. A sudden realization that they will soon be on their own as both business and medical managers probably accounts for the large number of our residents who elect to repeat the practice management course in their third year after taking it initially in the second year.

Our residents gain experience in management of rural patients from several perspectives. For example, a UAH-Huntsville Hospital resident on rural preceptorship may refer an obstetrical patient through the North Alabama Perinatal Center<sup>1</sup> to a faculty obstetrician-gynecologist at the Ambulatory Care Center for ultrasound examination. That same resident, while on ob/gyn rotation, may have delivered a woman referred through the North Alabama Perinatal Center to Huntsville Hospital by another resident on rural preceptorship. On pediatrics rotation, the resident may care for a high risk newborn in North Alabama's only Level III Nursery (at Huntsville Hospital) and may follow up seeing the baby as an outpatient at the Well Child Clinic in the Ambulatory Care Center.

Our residents may refer children whom they see in the family practice modules—children who may not have had much health care before and after birth—to the school's De-

velopmental Disabilities Clinic, where the child will receive diagnosis and a recommended treatment plan from one of the Southeast's very few multi-disciplinary developmental diagnostic teams, including a developmental psychologist, family practice residents and faculty, pediatricians, dentists, mental health professionals, social workers, and medical and nursing students.

The Family Unit

Since, like all family practice residencies, the Huntsville program is designed to emphasize the family as a unit of patient care, our residents have ample opportunity to observe health interactions within the family unit and possible health differences between country families and city families. The residents care for rural elderly patients in the Ambulatory Care Center and in nursing homes in Madison County. Since house calls are required of our residents, they become accustomed to this es-

sential aspect of a rural family doctor's life.

It is still early in the history of the Huntsville family practice residency for us to be able to assess how well our curriculum is preparing family physicians for rural health care. Most of the thirty-seven family physicians who have completed the UAH-Huntsville Hospital program through June 30, 1980, are practicing in small towns (Figure I); almost all are in Alabama or southcentral Tennessee. (Downtown Huntsville is only 20 miles from the Tennessee border.) We will enter July, the beginning of the next residency year, with a full complement of 36 residents, having filled our 12 first-year entering positions entirely from top choices in the National Resident Matching Program. With cuts in funding for this school's educational programs and expansion of our junior and senior medical students to a total of 60, our family practice residents will be called upon to accomplish more with less. We are confident that they will succeed in doing so.

FIGURE I

As of June 30, 1980, 37 residents will have graduated from the Huntsville program. 35 out of 37 are or will be practicing in Alabama and nearby states.

<b>ALABAMA:</b>	*Alabaster 2, *Centre 1, *Dadeville 2, *Hartselle 1, Huntsville 9, Mobile 1, *Moulton 1, *Red Bay 1, Scottsboro 2, *Stevenson 1, *Trussville 1	22
<b>TENNESSEE:</b>	*Dickson 2, *Fayetteville 3, Lebanon 1, *Mt. Pleasant 1, Oak Ridge 2	9
<b>GEORGIA:</b>	*Cummings 1	1
<b>MISSISSIPPI:</b>	*Quitman 1	1
<b>KENTUCKY:</b>	*Columbia 1	1
<b>FLORIDA:</b>	Plant City 1	1
	Southeast .....	35
	Other locations (with religious organizations) .....	2
	Total .....	37

Of the residents practicing in the Southeast, 19 are or will be in \*towns with populations of less than 10,000. 25 are or will be in towns with populations of less than 30,000.



## FIGURE II

### PHASE I—First Year Rotations Family Practice Experience

Pediatrics—3 months

1 month General Pediatric Ward  
1 month Intensive Care Nursery  
1 month Office Pediatrics

Obstetrics/Gynecology—3 months

Integrated mixture of normal and high risk  
obstetrics, prenatal and gynecology

Medicine—3 months

General in-patient medicine

Surgery—3 months

2 months general surgery  
1 month emergency medicine

### PHASE I—Second Year Rotations

Neurology—1 month

Cardiology—1 month

Gastroenterology—1 month

Orthopedics—1 month

Pediatrics—1 month

General Internal Medicine—2 months

Two ½ days

Family Practice Center

6-10 patients per session

### PHASE II

Family Practice—12 months

During Family Practice Months:

1) a two month longitudinal experience in  
Psychiatry takes place

Six-seven ½ days

Family Practice Center

6-15 patients per session

2) three ½ days per week on a monthly  
basis are spent in the following areas:  
ENT, Dermatology, Ophthalmology,  
Gynecology, Orthopedics, Radiology,  
Dental Clinic, Pediatric Clinic & Others

Electives—5 months . . . . .

Two ½ days

Family Practice Center

Rural Preceptorship—2 months . . . . .

Full time with preceptor

## FIGURE III

### FAMILY MEDICINE RESIDENCY CONFERENCE SCHEDULE

APRIL, 1980

	12:30	12:00	12:30-1:30	12:00
	FAMILY MEDICINE GRAND ROUNDS	OB/GYN CONFERENCE	MEDICINE CONFERENCE	PEDIATRIC CONFERENCE
			1:30-4:30	(1st Year Residents)
12:30			DERMATOLOGY CON- FERENCE	
FAMILY MEDICINE CLINICAL CONFERENCE	12:30	12:00		12:00
	ORTHOPEDIC CONFER- ENCE	OB/GYN CONFERENCE	12:30-1:30	PEDIATRIC CONFER- ENCE
4:30			MEDICINE CONFERENCE	(1st Year Residents)
SURGERY CONFER- ENCE			1:45-4:30	
			BUSINESS MANAGE- MENT CONFERENCE	
12:30	12:30	12:00		12:00
FAMILY MEDICINE CLINICAL CONFERENCE	FAMILY MEDICINE GRAND ROUNDS	OB/GYN CONFERENCE	12:30-1:30	PEDIATRIC CONFER- ENCE
4:30			MEDICINE CONFERENCE	(1st Year Residents)
SURGERY CONFER- ENCE			1:45	
			EKG CONFERENCE	
12:30	12:30	12:00	3:00	12:00
FAMILY MEDICINE CLINICAL CONFERENCE	ORTHOPEDIC CONFER- ENCE	OB/GYN CONFERENCE	BLOOD BANKING	PEDIATRIC CONFER- ENCE
4:30				(1st Year Residents)
SURGERY CONFER- ENCE			12:30-1:30	
			MEDICINE CONFERENCE	
12:30	12:30		1:45-3:00	
FAMILY MEDICINE CLINICAL CONFERENCE	FAMILY MEDICINE GRAND ROUNDS		EKG CONFERENCE	
4:30			3:00-4:30	
SURGERY CONFERENCE		12:00	PSYCHOLOGICAL MEDICINE	
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

# MALIGNANT HYPERTHERMIA

J. Russell Eubanks, Jr., M.D.\*

In the late 1950's and early 60's, sporadic cases of uncontrolled high temperature under anesthesia began to appear in the literature. By 1968, the syndrome of Malignant Hyperthermia was well recognized. Mortality was reported to be in excess of 70-80%. (1) Because of familial incidence, etiology was thought to be related to a genetic defect triggered by potent inhalation anesthetics or muscle relaxants used in anesthesia.(2)

Today, prevailing thought is that the etiology in some cases is genetic (AUTOSOMAL DOMINANT WITH VARIABLE PENETRANCE). The anatomic genetic defect may be found in the sarcoplasmic reticulum where an abnormal release of calcium produces a prolonged tetany of the myofibrils. There is a resultant release of tremendous amounts of heat through the conversion of ATP to ADP.(3) If there is a central lesion, it may well involve the preoptic area of the hypothalamus controlling temperature regulation.

Incidence of the syndrome is rare, estimated to be between 1:40,000 to 1:100,000 depending on the surgical population.(4) MH occurs primarily in muscular individuals between the ages of 15 and 30. It has been reported in patients as young as 6 months of age and as old as 72.(5) There seems to be a propensity for patients with musculoskeletal defects. Strabismus, hernias, and acute orthopedic trauma is a frequently accompanying factor.

Although an elevated CPK may be present in some patients who have exhibited this syndrome, it is not diagnostic and certainly may be present secondary to other causes as in the case of trauma.

The earliest sign or symptom is a family history of "high fever" under anesthesia. An unexplained tachycardia present prior to or during surgery begins to reveal the underlying changes in cellular physiology. A metabolic acidosis from the increasing level of tissue and serum lactic acid uses available bicarbonate buffer stores with compensatory hyperventilation occurring to decrease  $p\text{CO}_2$ . Diaphoresis may also be seen.

Rigidity rather than anticipated relaxation following the use of a muscle relaxant should be pathognomic. Rigidity occurs in 70-80% of the cases of MH.(6) Although this phenomenon has most commonly been seen with succinyl choline (anectine), it has also been reported with non-depolarizing relaxants such as curare and pancuronium bromide (pavulon).

With the influx of calcium into the cells, potassium is pushed out as reflected in a transient serum hyperkalemia. This may produce various rhythm disturbances of the myocardium.

Core temperature begins to rise. It may remain 0.5-1°C above the preoperative range for thirty minutes to one hour before a precipitous rise is seen.(7) In the "rigid" patient, temperature elevation may be very dramatic rising as much as 1° in a ten minute period.

As the temperature continues to rise, coagulation defects may appear as well as an interstitial pulmonary edema.(7) Cerebral edema also can occur. Hypoxia from markedly increased oxygen demands continues to impede attempts at normal cellular function. Finally, myoglobin and free hemoglobin coalesce in the renal tubules producing failure of that organ.

Treatment is symptomatic. Early diagnosis is of paramount importance. Dantrolene Sodium (Dantrium) is now available in oral and intravenous form. It is the specific drug treatment or pre-treatment of choice. The drug is expensive but should be readily available in all hospitals providing anesthesia and surgery. The intravenous dosage is 1 mg/kg. The mechanism of action appears to be directed toward the lowering of intracellular calcium by preventing the release of calcium from the sarcoplasmic reticulum into the myoplasm.(7)

Rapid cooling using ice bags or an ice bath, ice water lavage and intravenous cold 5% Dextrose in Ringers' Lactate are effective. D5RL is kept refrigerated at many institutions and needs only to be replaced as expiration dates dictate.

Acidosis is profound and the initial infusion of 1-2 meq/kg of  $\text{NaHCO}_3$  is necessary. Cessation of all anesthetics as soon as feasible is followed by hyperventilation with high flows of  $\text{O}_2$ . Oxygen demands, normally 200-300 cc/min, can reach levels as high as 1000-1200 cc/min.

The development of respiratory distress is related to the sequestering of interstitial fluid and is treated with controlled ventilation along with the use of Positive End-Expiratory Pressure (PEEP).

The development of a Diffuse Intravascular Coagulopathy (DIC) and other coagulation defects can be treated with heparin. Accumulation of myoglobin and hemoglobin in the renal tubules is treated with diuretics and judicious use of intravenous fluids.

\*Anesthesiologist in private practice in Mobile, Alabama.



# WHEN ANXIETY AND TENSION MAGNIFY PAIN

IN MUSCULOSKELETAL DISEASE\*



A non-narcotic one-two punch against pain, with concurrent relief of anxiety/tension

## EQUAGESIC<sup>®</sup> <sup>IV</sup>

(meprobamate and ethoheptazine citrate with aspirin) Wyeth

### EQUAGESIC—Abbreviated Summary

**\*INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and on other information, FDA has classified the indications as follows:

“Possibly” effective for the treatment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease or tension headache.

Final classification of the less-than-effective indications requires further investigation.

The effectiveness of Equagesic in long-term use, i.e., more than four months, has not been assessed by systematic clinical studies. The physician should periodically reassess usefulness of the drug for the individual patient.

**CONTRAINDICATIONS:** Equagesic should not be given to individuals with a history of sensitivity or severe intolerance to aspirin, meprobamate, or ethoheptazine citrate.

**WARNINGS:** Careful supervision of dose and amounts prescribed for patients is advised, especially with those patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g., alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on or habituation to the drug. Where excessive dosage has continued for weeks or months, dosage should be reduced gradually rather than abruptly stopped, since withdrawal of a “crutch” may precipitate withdrawal reaction of greater proportions than that for which the drug was originally prescribed. Abrupt discontinuance of doses in excess of the recommended dose has resulted in some cases in the occurrence of epileptiform seizures.

Special care should be taken to warn patients taking meprobamate that tolerance to alcohol may be lowered with resultant slowing of reaction time and impairment of judgement and coordination.

**USAGE IN PREGNANCY AND LACTATION:** An increased risk of congenital malformations associated with the use of minor tranquilizers (meprobamate, chlori-

azepoxide, and diazepam) during the first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of child-bearing potential may be pregnant at the time of institution of therapy should be considered. Patients should be advised that if they become pregnant during therapy or intend to become pregnant they should communicate with their physicians about the desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical-cord blood at or near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breast-feeding patients, the drug's higher concentrations in breast milk as compared to maternal plasma levels should be considered.

Preparations containing aspirin should be kept out of the reach of children. Equagesic is not recommended for patients 12 years of age and under.

**PRECAUTIONS:** Should drowsiness, ataxia, or visual disturbance occur, the dose should be reduced. If symptoms continue, patients should not operate a motor vehicle or any dangerous machinery.

Suicidal attempts with meprobamate have resulted in coma, shock, vasomotor and respiratory collapse, and anuria. Very few suicidal attempts were fatal, although some patients ingested very large amounts of the drug (20 to 40 gm). These doses are much greater than recommended. The drug should be given cautiously, and in small amounts, to patients who have suicidal tendencies. In cases where excessive doses have been taken, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Hyperventilation has been reported occasionally. Any drug remaining in the stomach should be removed and symptomatic treatment given. Should respiration become very shallow and slow, CNS stimulants, e.g., caffeine, Metrazol, or am-

phetamine, may be cautiously administered. If severe hypotension develops, pressor amines should be used parenterally to restore blood pressure to normal levels.

**ADVERSE REACTIONS:** A small percentage of patients may experience nausea with or without vomiting and epigastric distress. Dizziness occurs rarely when meprobamate and ethoheptazine citrate with aspirin is administered in recommended dosage. The meprobamate may cause drowsiness but, as a rule, this disappears as therapy is continued. Should drowsiness persist and be associated with ataxia, this symptom can usually be controlled by decreasing the dose, but occasionally it may be desirable to administer central stimulants such as amphetamine or mephentermine sulfate concomitantly to control drowsiness.

A clearly related side effect to the administration of meprobamate is the rare occurrence of allergic or idiosyncratic reactions. This response develops, as a rule, in patients who have had only 1-4 doses of meprobamate and have not had a previous contact with the drug. Previous history of allergy may or may not be related to the incidence of reactions. Mild reactions are characterized by an itchy urticarial or erythematous, maculopapular rash which may be generalized or confined to the groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema, and fever have also been reported.

More severe cases, observed only very rarely, may also have other allergic responses, including fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case), and hyperthermia. Treatment should be symptomatic such as administration of epinephrine, antihistamine, and possibly hydrocortisone. Meprobamate should be stopped, and institution of therapy should not be attempted. Rare cases have been reported where patients receiving meprobamate suffered from aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia. In nearly every instance reported, other toxic agents known to have caused these conditions have been associated with meprobamate. A few cases of leukopenia during

continuous administration of meprobamate are reported, most of these returned to normal without discontinuation of the drug.

Impairment of accommodation and visual acuity has been reported rarely.

**OVERDOSE:** Two instances of accidental or intentional significant overdosage with ethoheptazine citrate combined with aspirin have been reported. These were accompanied by symptoms of CNS depression, including drowsiness and light-headedness, with uneventful recovery. However, on the basis of pharmacological data, it may be anticipated that CNS stimulation could occur. Other anticipated symptoms would include nausea and vomiting. Appropriate therapy of signs and symptoms as they appear is the only recommendation possible at this time. Overdosage with ethoheptazine combined with aspirin would probably produce the usual symptoms and signs of salicylate intoxication. Observation and treatment should include induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoadicidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions.

**DESCRIPTION:** Each Equagesic tablet contains 150 mg meprobamate, 75 mg ethoheptazine citrate and 250 mg aspirin.

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\*This drug has been evaluated as possibly effective for this indication.

**Wyeth Laboratories**  
Philadelphia, Pa. 19101





# FOR MODERATE PAIN

A therapeutic dose of acetaminophen in one tablet

A therapeutic dose of two complementary analgesics

The convenience and economy of a dosage schedule of one tablet, every four hours as needed

## WHY NOT WYGESIC®

(65 mg propoxyphene HCl and 650 mg acetaminophen) Wyeth

### WYGESIC—Abbreviated Summary

**INDICATION:** For the relief of mild-to-moderate pain.  
**CONTRAINDICATION:** Hypersensitivity to propoxyphene or to acetaminophen.

**WARNINGS:** CNS ADDITIVE EFFECTS AND OVERDOSAGE: Propoxyphene in combination with alcohol, tranquilizers, sedative-hypnotics, or other CNS depressants has an additive depressant effect. Patients taking this drug should be advised of the additive effect and warned not to exceed the dosage recommended. Toxic effects and fatalities have occurred following overdoses of propoxyphene alone or in combination with other CNS depressants. Most of these patients had histories of emotional disturbances or suicidal ideation or attempts, as well as misuse of tranquilizers, alcohol, or other CNS-active drugs. Caution should be exercised in prescribing large amounts of propoxyphene for such patients (see Management of Overdosage).

**DRUG DEPENDENCE:** Propoxyphene can produce drug dependence characterized by psychic dependence and less frequently, physical dependence and tolerance. It will only partially suppress the withdrawal syndrome in individuals physically dependent on morphine or other narcotics. The abuse liability of propoxyphene is qualitatively similar to codeine's although quantitatively less, and propoxyphene should be prescribed with the same degree of caution appropriate to the use of codeine.

**USAGE IN AMBULATORY PATIENTS:** Propoxyphene may impair the mental and/or physical abilities required for potentially hazardous tasks, e.g. driving a car or operating machinery. Patients should be cautioned accordingly.

**USAGE IN PREGNANCY:** Sale use in pregnancy has not been established relative to possible adverse effects on fetal development. INSTANCES OF WITHDRAWAL SYMPTOMS IN THE NEONATE HAVE BEEN REPORTED FOLLOWING USAGE DURING PREGNANCY. Therefore, propoxyphene should not be used in pregnant women unless, in the

judgement of the physician, the potential benefits outweigh the possible hazards.

**USAGE IN CHILDREN:** Propoxyphene is not recommended for children because documented clinical experience has been insufficient to establish safety and a suitable dosage regimen in the pediatric group.

**PRECAUTIONS:** Confusion, anxiety, and tremors have been reported in a few patients receiving propoxyphene concomitantly with orphenadrine. The CNS depressant effect of propoxyphene may be additive with other CNS depressants, including alcohol.

**ADVERSE REACTIONS:** The most frequent adverse reactions are dizziness, sedation, nausea, and vomiting. These seem more prominent in ambulatory than in nonambulatory patients; some of these reactions may be alleviated if the patient lies down.

Other adverse reactions include constipation, abdominal pain, skin rashes, light-headedness, headache, weakness, euphoria, dysphoria, and minor visual disturbances. The chronic ingestion of propoxyphene in doses over 800 mg per day has caused toxic psychoses and convulsions. Cases of liver dysfunction have been reported.

**DRUG INTERACTIONS:** Propoxyphene in combination with alcohol, tranquilizers, sedative-hypnotics, and other CNS depressants has an additive depressant effect. Patients taking this drug should be advised of the additive effect and warned not to exceed the dosage recommended (see Warnings). Confusion, anxiety, and tremors have been reported in a few patients receiving propoxyphene concomitantly with orphenadrine.

**MANAGEMENT OF OVERDOSAGE:** SYMPTOMS: The manifestations of serious overdosage with propoxyphene are similar to those of narcotic overdosage and include respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, pupillary constriction, and circulatory collapse. In addition to these characteristics, which are reversed by narcotic antago-

nists such as naloxone, there may be other effects. Overdose of propoxyphene can cause delay of cardiac conduction as well as focal or generalized convulsions, a prominent feature in most cases of severe poisoning. Cardiac arrhythmias and pulmonary edema have occasionally been reported, and apnea, cardiac arrest, and death have occurred.

Symptoms of massive overdosage with acetaminophen may include nausea, vomiting, anorexia, and abdominal pain, beginning shortly after ingestion and lasting for 12 to 24 hours. However, early recognition may be difficult since early symptoms may be mild and nonspecific. Evidence of liver damage is usually delayed. After the initial symptoms, the patient may feel less ill; however, laboratory determinations are likely to show a rapid rise in liver enzymes and bilirubin. In case of serious hepatotoxicity, jaundice, coagulation defects, hypoglycemia, encephalopathy, coma, and death may follow. Renal failure due to tubular necrosis, and myocardiopathy, have also been reported.

Ingestion of 10 grams or more of acetaminophen may produce hepatotoxicity. A 13-gram dose has reportedly been fatal.

**TREATMENT:** Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and institution of assisted or controlled ventilation. The narcotic antagonists, naloxone, nalorphine, and levallorphan, are specific antidotes against the respiratory depression produced by propoxyphene. An appropriate dose of one of these antagonists should be administered, preferably IV, simultaneously with efforts at respiratory resuscitation and the antagonist should be repeated as necessary until the patient's condition remains satisfactory. In addition to a narcotic antagonist, the patient may require careful titration with an anticonvulsant to control seizures. Analeptic drugs (e.g. caffeine or amphetamine) should not be used because of their tendency to precipitate convulsions.

Oxygen, IV fluids, vasopressors and other supportive measures should be used as indicated. Gastric lavage may be helpful. Activated charcoal can absorb a significant amount of ingested propoxyphene. Dialysis is of little value in poisoning by propoxyphene alone. Acetaminophen is rapidly absorbed, and efforts to remove the drug from the body should not be delayed. Copious gastric lavage and/or induction of emesis may be indicated. Activated charcoal is probably ineffective unless administered almost immediately after acetaminophen ingestion. Neither forced diuresis nor hemodialysis appears to be effective in removing acetaminophen. Since acetaminophen in overdose may have an antidiuretic effect and may produce renal damage, administration of fluids should be carefully monitored to avoid overload. It has been reported that mercaptopurine (cysteine) or other thiol compounds may protect against liver damage if given soon after overdosage (8-10 hours). N-acetylcysteine is under investigation as a less toxic alternative to mercaptopurine, which may cause anorexia, nausea, vomiting, and drowsiness. Appropriate literature should be consulted for further information. (JAMA 237:2405-2407, 1977).

Clinical and laboratory evidence of hepatotoxicity may be delayed up to one week. Acetaminophen plasma levels and half-life may be useful in assessing the likelihood of hepatotoxicity. Serial hepatic enzyme determinations are also recommended.

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Corticosteroids may be effective in restoring capillary integrity as well as having a positive inotropic effect on the heart. Cerebral edema may also be reduced.

Mortality at present is still 50-60% but survival seems to be improved with early recognition. (7) Core temperature monitors are necessary in detecting early shifts of temperature. The best index for detection is the maintenance of a high level of suspicion for any patient exhibiting an unexplained tachycardia or arrhythmia. Family history may well be the key for raising ones levels of suspicion. We have an anesthetic information questionnaire to be filled out by the surgical patient relating to previous anesthetic or surgical experience. This gives the patient more time to think about prior problems before the preoperative visit.

Diagnosis is made from events occurring, including a rapid rise in temperature or the presence of any of the above symptoms in combination. A marked elevation of CPK, usually about 1000 units, a persistent base deficit, a transient hyperkalemia are all part of the corroborative evidence. If one treats on suspicion at the earliest time, there will always be the question of whether this was truly MH. Muscle biopsy using caffeine stimulation may not always be diagnostic and electron microscopy has not provided an absolute answer. (7) The diagnosis is generally clinical.

For those patients who need surgery in spite of a known or anticipated problem with MH, pre-treatment

with an oral form of Dantrolene Sodium is probably indicated. The use of a non-depolarizing muscle relaxant and a narcotic-N<sub>2</sub>O-O<sub>2</sub> mixture has proven suitable. Regional anesthesia seems preferable where indicated.

In our surgical population over the past 12 years, involving over 334,000 surgical procedures, there have been 5 cases of MH. Three of these patients survived without sequelae and two died. The incidence appears to be 1:66,000 in Mobile, Alabama.

MH is a devastating syndrome that still carries a significant mortality. Constant awareness is ones greatest asset in the successful management at this point.

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## Sx's

- family/pt hx
- unexplained tachycardia
- unexplained arrhythmia
- cyanosis
- diaphoresis
- muscular rigidity
- tachypnea
- rapid rise in core temperature

## Rx

- stop anesthetic agents
- hyperventilate with O<sub>2</sub>
- Dantrolene
- iced cooling
- cold D5RL
- NaHCO<sub>3</sub>
- diuretics
- +/- insulin
- +/- heparin

## Lab Tests

- arterial blood gases
- coagulogram
- urinalysis
- CPK, creatinine
- blood cultures
- CBC
- Chest X-Ray
- EKG



Mrs. O. B. Carr, Jr.  
*President, A-MASA*

# Auxiliary

## AMASA Honors Ruth

Have you ever been to a family reunion? If so, you remember all the love, fellowship, memories and full stomach you took home with you. If you weren't in Montgomery April 16-19, 1980, you missed your family reunion . . . a reunion of your medical family of AMASA. I hope the following highlights will make your mouth water and your heart swell with pride so you will not want to miss our reunion next year in Mobile.

The 57th Annual Convention of the Auxiliary to the Medical Association of the State of Alabama was held April 16-18, 1980, at the Holiday Inn Holidome in Montgomery, Alabama. On Wednesday a pre-convention board meeting was held with Mrs. Eugene H. Bradley, President, presiding.

We were very proud to have as our special guest Mrs. Ruth Johnson, AMA Auxiliary President; Mrs. Hazel Lewis, Executive Director AMA Auxiliary; Mrs. Raymond Yow, President, Auxiliary to the Southern Medical Association; and Mrs. Linus Hewit,

Long Range Planning Committee Chairman of the AMA Auxiliary from Tampa, Florida.

Other highlights of the meeting were:

Mrs. Arthur Stamler, AMAERF State Chairman, reported a total of \$30,150.65 collected thus far and urged continued financial support of the Loan Guarantee Fund.

Mrs. John Chenault made the motion that the following resolution be adopted:

WHEREAS, Mrs. Ben H. Johnson, Jr. has rendered outstanding service to the Auxiliary to the Medical Association of the State of Alabama during the past twenty-five years; and

WHEREAS, She has been state chairman of the mental health, American Medical Association Education and Research Foundation, and ALAPAC as well as having led this Auxiliary as its President-Elect and President during the years 1968-1970;

and

WHEREAS, She has reflected honor upon the State Auxiliary by her efficient management of duties in the American Medical Association Auxiliary in diverse areas as AMA-ERF, Communications, By-Laws, and Membership; and

WHEREAS, The American Medical Association Auxiliary House of Delegates has demonstrated its confidence in her ability by electing her as director, southern regional vice-president, first vice-president, and president-elect; and

WHEREAS, She presently serves with distinction as President of the American Medical Association Auxiliary; and

WHEREAS, She has ever remained vitally interested in her county auxiliary, serving two terms as president of Jefferson-Bessemer and currently as county treasurer; and

WHEREAS, She has been



faithful in attendance at state board meetings and always ready to share her broad knowledge of Auxiliary work, giving advice and assistance whenever needed; therefore be it

RESOLVED, That honorary membership be conferred upon Ruth Johnson by the Auxiliary to the Medical Association of the State of Alabama as an expression of appreciation and gratitude for her loving service to this organization. Dated this 18th Day of April, 1980.

The motion was seconded and carried.

Wednesday evening, a reception was held at the lovely home of Dr. and Mrs. J.E. Dunn, Jr., in Wetumpka honoring Mrs. Ben Johnson, Jr. AMASA State Board members and guests attended.

A "Southern Breakfast" (including biscuits and grits) was held on Thursday morning, on the Terrace Holidome, honoring Mrs. Raymond Yow, President Auxiliary to the Southern Medical Association. Dr. William Tisdale, President of Montgomery County Medical Association, Dr. Luther Hill, MASA President and Dr. Hoyt Gardner, President of the AMA were our special guests.

The Convention Opening Session began with Mrs. Eugene Bradley presiding. Mrs. Thomas Tyler, President, Montgomery-Autauga Auxiliary, Welcomed guests and members of AMASA. A Memorial Service for members who have died during the 1979-1980 Auxiliary year was conducted by Mrs. Rufus Lee, honoring Mrs. Wyatt H. Blake, Jr., Mrs. Andrew S. Rosemore, Mrs.

Bruce Russell, Mrs. Lawrence H. Owsley, and Mrs. William H. Blakney.

After the business meeting, the auxiliary recessed to attend a delicious luncheon and fashion show at the Montgomery Civic Center which was planned by Convention Chairman Mrs. William Smith and Mrs. William Hughes of Montgomery.

Thursday night entertainment was enjoyed by all doctors and their spouses. The Lampliter Dinner Theater's food and play were delightful.

MASA's Prayer Breakfast on Friday a.m. was a special time for everyone who attended, conducted by Dr. Arthur Stamler of Decatur.

The final session of the AMASA 1980 Convention began on Friday. The Resolution of Honorary Membership was read and presented to Mrs. Ruth Johnson. Mrs. Aubrey Terry, Chairman of the Nominating Committee, presented the following slate of officers for 1980-1981, which were elected:

President 1980-1981—Mrs. O. B. Carr, Jr., Sylacauga;

President-Elect—Mrs. Rufus Lee, Dothan;

First Vice President—Mrs. Robert Estock, Birmingham;

District Vice President—NE—Mrs. Andrew Brown, Gadsden; NW—Mrs. Robert Rhyne, Moulton; SE—Mrs. William Lazenby, Opelika; SW—Mrs. John Taylor, Mobile.

Recording Secretary—Mrs. Ralph Braund, Sheffield

Treasurer—Mrs. Lamar Thomas, Birmingham

Delegates selected for the

AMA Auxiliary National Convention in Chicago in July of 1980 were: Mrs. Eugene Bradley, Mrs. Rufus Lee, Mrs. William Smith, Mrs. William Hughes, Mrs. Aubrey Terry and Mrs. Robert Estock. Alternates selected were Mrs. William Lazenby, Mrs. Robert Finchum, Mrs. Charles Ebert, Mrs. Lamar Thomas, Mrs. Richard McElvein, Mrs. Roddy Cook.

Mrs. George Scofield thanked the outgoing President, Mrs. Eugene Bradley, and conducted a beautiful installation ceremony with red roses for the new officers. (I was presented the President's pin and gavel by Mrs. Bradley and Mrs. Aubrey Terry, 1978-1979 President, presented the past president's pin to Mrs. Bradley and congratulated her for a most successful 1979-1980 auxiliary year of leadership.)

A lovely luncheon honoring Mrs. Ben Johnson, Jr. and AMASA past-presidents was attended and the AMAERF contributions were given to the Deans of Alabama Medical Schools to use as unrestricted funds for the coming year. The convention was adjourned by Mrs. Eugene Bradley, 1979-1980 President.

Plans are already being made for MASA's family reunion next year and you're invited!



# Recurrent Meningitis

LeRoy F. Harris, M.D.\*  
Assistant Professor of Internal Medicine

\*Department of Medicine  
School of Primary Medical Care  
University of Alabama in Huntsville  
Clinical Science Center  
109 Governors Drive  
Huntsville, Alabama

A patient with recurrent meningitis is described. Repeated attacks of meningitis are caused by anatomic defects of the central nervous system, parameningeal foci of infection and impaired antibacterial responses. *Streptococcus pneumoniae* is the most common etiologic agent with *Hemophilus influenzae*, *Staphylococcus aureus*, *Pasteurella multocida*, *Acinetobacter* species and *Neisseria meningitidis* also seen. A diagnostic and therapeutic approach to the patient with recurrent meningitis is presented.

## Key Words

Recurrent meningitis  
CNS anatomic defect  
Parameningeal infection  
Immune deficiency  
*Streptococcus pneumoniae*

Recurrent bacterial meningitis presents the physician with the dual problem of treatment of a life-threatening infection and determination of the cause of recurrence. Recently a patient was treated for his fourth bout of meningitis, three documented to be caused by *Streptococcus pneumoniae*. A review of the literature and diagnostic approach to this problem is presented.

## CASE REPORT

A 32 year old man was transferred from another hospital with suspected meningitis. The patient suffered a closed head injury as a child and in the past 10 years had three previous bouts of meningitis with *Streptococcus pneumoniae* being isolated from the cerebrospinal fluid during two of these illnesses.

On the morning of admission the patient awoke with a headache and fever and rapidly became comatose. He was admitted to his local hospital and started on aqueous penicillin after blood cultures were drawn and a lumbar puncture was attempted unsuccessfully. He was transferred to the hospital in a comatose state with nuchal rigidity and a rectal temperature of 103°F. On lumbar puncture his cerebrospinal fluid was purulent, had a protein of 910 mg% and a glucose of less than 10 mg% and was positive for pneumococcal capsular antigen by counterimmunoelectrophoresis. Blood cultures drawn at the other hospital grew *Streptococcus pneumoniae*. The patient made an uneventful recovery on intravenous aqueous penicillin, 24 million units a day. Investigation for the etiology of the patient's recurrent meningitis revealed a normal CT scan, a normal sized spleen on liver-spleen scan, normal immunoglobulin and beta-1-C complement levels and no evidence of granulocytopenia. Paranasal sinus x-rays showed pansinusitis and cerebrospinal fluid rhinorrhea was demonstrated on ytterbium 169 cisternography.

After receiving a pneumococcal vaccine the patient was discharged readmitted for elective low frontal craniotomy and repair of a suspected dural leak. At surgery no definite leak was found and the patient made an uneventful recovery.

## Discussion

Three conditions are associated with repeated attacks of meningitis: anatomic defects of the central nervous system, parameningeal foci of infection and im-

\*Address all correspondence to LeRoy F. Harris, M.D. at the above address





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\*Central alpha-adrenergic stimulation decreases sympathetic outflow from the brain, as shown in animal studies.

<sup>1</sup> Data on file at Boehringer Ingelheim Ltd.

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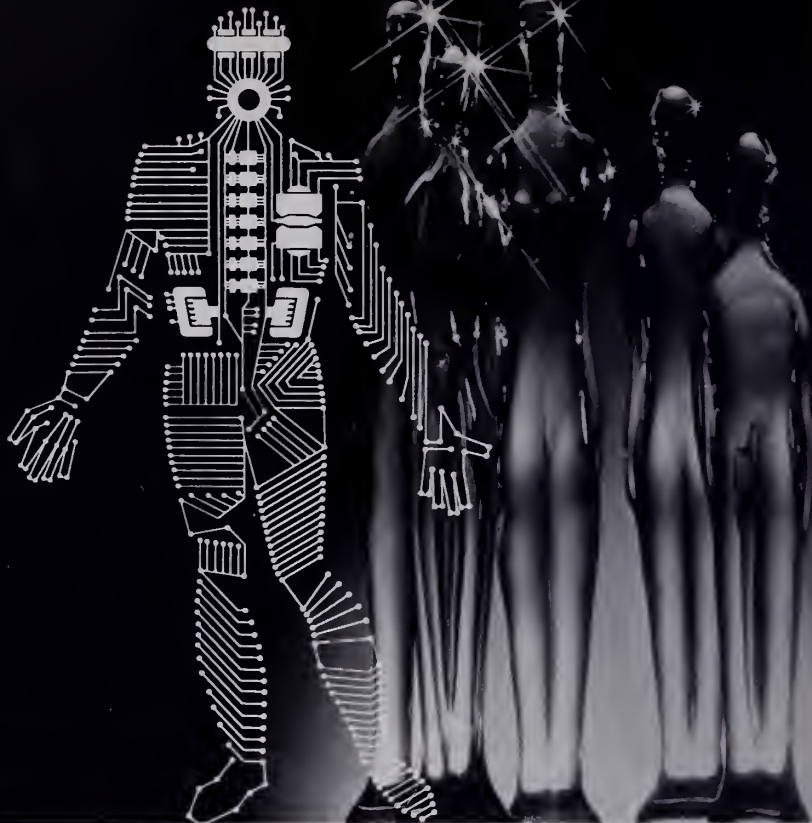
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**Indication:** The drug is indicated in the treatment of hypertension. As an anti-hypertensive drug, Catapres (clonidine hydrochloride) is mild to moderate in potency. It may be employed in a general treatment program with a diuretic and/or other antihypertensive agents as needed for proper patient response.

**Warnings:** Tolerance may develop in some patients necessitating a reevaluation of therapy.

**Usage in Pregnancy:** In view of embryotoxic findings in animals, and since information on possible adverse effects in pregnant women is limited to uncontrolled clinical data, the drug is not recommended in women who are or may become pregnant unless the potential benefits outweigh the potential risk to mother and fetus.

**Usage in Children:** No clinical experience is available with the use of Catapres (clonidine hydrochloride) in children.

**Precautions:** When discontinuing Catapres (clonidine hydrochloride), reduce the dose gradually over 2 to 4 days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients should be instructed not to discontinue therapy without consulting their physician. Rare instances of hypertensive encephalopathy and death have been recorded after cessation of clonidine hydrochloride therapy. A causal relationship has not been established in these cases. It has been demonstrated that an excessive rise in blood pressure, should it occur, can be reversed by resumption of clonidine hydrochloride therapy or by intravenous phentolamine. Patients who engage in potentially hazardous activities, such as operating machinery or driving, should be advised of the sedative effect. This drug may enhance the CNS-depressive effects of alcohol, barbiturates and other sedatives. Like any other agent lowering blood pressure, clonidine hydrochloride should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

As an integral part of their overall long-term care, patients treated with Catapres (clonidine hydrochloride) should receive periodic eye examinations. While, except for some dryness of the eyes, no drug-related abnormal ophthalmologic findings have been recorded with Catapres (clonidine hydrochloride), in several studies the drug produced a dose-dependent increase in the incidence and severity of

The usual starting dose of Catapres is 0.1 mg at breakfast and 0.1 mg at bedtime. Some patients may benefit from a starting dose of 0.1 mg at bedtime.

Usual daily dose range—0.2—0.8 mg

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Doses as high as this have rarely been employed.

For optimal results, the dose of Catapres must be adjusted according to the patient's individual blood pressure response.

spontaneously occurring retinal degeneration in albino rats treated for 6 months or longer.

**Adverse Reactions:** The most common reactions are dry mouth, drowsiness and sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In some instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormalities in liver function tests; one report of possible drug-induced hepatitis without icterus and hyperbilirubinemia in a patient receiving clonidine hydrochloride, chloralhydrate and papaverine hydrochloride. Weight gain, transient elevation of blood glucose, or serum creatine phosphokinase: congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes, nervousness, restlessness, anxiety and mental depression. Also rash, angioneurotic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness, itching or burning of the eyes, dryness of the nasal mucosa, pallor, gynecostasia, weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.

**Overdosage:** Profound hypotension, weakness, somnolence, diminished or absent reflexes and vomiting followed the accidental ingestion of Catapres (clonidine hydrochloride) by several children from 19 months to 5 years of age. Gastric lavage and administration of an analeptic and vasopressor led to complete recovery within 24 hours. Tolazoline in intravenous doses of 10 mg at 30-minute intervals usually abolishes all effects of Catapres, (clonidine hydrochloride) overdosage.

**How Supplied:** Catapres, brand of clonidine hydrochloride, is available as 0.1 mg (tan) and 0.2 mg (orange) oval, single-scored tablets in bottles of 100 and 1000. Also available as 0.3 mg (peach) oval, single-scored tablets in bottles of 100.

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paired antibacterial responses (1). Anatomic defects of the central nervous system may be congenital or acquired and provide organisms a pathway from the external environment to the leptomeninges. Congenital defects include meningomyeloceles, neurenteric cysts and midline dermal sinuses, while acquired defects may be secondary to trauma, tumor or surgery. Skull fractures involving the paranasal sinuses and ears are the commonest acquired lesions and the trauma producing such defects may be in the distant past and not remembered by the patient or family. The hallmark of such fractures is cerebrospinal fluid rhinorrhea or otorrhea which because of its high glucose concentration, is detected in the nose or ear by glucose oxidase tape (Tes-Tape). Less voluminous cerebrospinal fluid leaks are discovered by detecting radioactivity on cotton pledgets placed in the nostrils after intrathecal injection of labeled tracer. Also routine skull x-rays with laminograms of the cribform plate may disclose an anatomic defect in the absence of cerebrospinal fluid leak.

Sinusitis, mastoiditis and skull osteomyelitis are the most common parameningeal foci of infection associated with recurrent meningitis. Definitive treatment of such foci is required to prevent recurrences of meningitis and should wait for at least 48-72 hours after initiation of antibiotic therapy for meningitis. The patient described in the case report with sinusitis and cerebrospinal fluid rhinorrhea demonstrates that more than one predisposing condition may be associated with recurrent meningitis. It is crucial to know this because treatment of the patient's sinusitis by irrigation of the sinuses in the presence of a cerebrospinal fluid fistula may have precipitated another attack of meningitis.

Impairment of the antibacterial response also has been associated with recurrent meningitis. Congenital agammaglobulinemia and acquired hypogammaglobulinemia of adulthood are associated with recurrent bacterial infections (2), including recurrent pneumococcal meningitis (3). Treatment with monthly injections of gammaglobulin might be expected to prevent such infections. In addition, a complement deficiency state, specifically of the sixth component of complement, recently has been reported in a patient with recurrent meningococcal meningitis (4).

Fulminant pneumococcal infections including isolated pneumococcal meningitis and repeated bouts of pneumococcal meningitis have been described in the asplenic state (3,5,6). The asplenia may be congenital, acquired through surgical removal or result from sickle-cell disease. Because of this association a patient with recurrent pneumococcal meningitis deserves to have a liver-spleen scan and the pneumococcal vaccine.

Other defects of the antibacterial response, including abnormal white blood cell function as seen in chronic granulomatous disease and reduced numbers of leukocytes as occur during chemotherapy, predispose to recurrent bacterial infections but to my knowledge have not been associated with recurrent meningitis (7,8,9).

Reported etiologic agents of recurrent meningitis are *Streptococcus pneumoniae*, *Hemophilus influenzae*, *Staphylococcus aureus*, *Pasteurella multocida*, *Acinetobacter* species (1), and *Neisseria meningitidis* (10). Of these, the diplococcus is the most frequent organism encountered both in absolute numbers and expressed as a percent of meningitis which is recurrent for a given bacterium (11).

The patient with recurrent pneumococcal meningitis is typically a young male with a history of head trauma in the distant past. The patient seeks hospitalization soon after the onset of symptoms probably because his prior bouts of meningitis enable him to recognize the disease early in its clinical course. Appropriate antibacterial therapy usually is effective in clearing each separate bout of meningitis, but neurological complications are more frequent in patients with recurrent pneumococcal meningitis than in patients with only single episode of pneumococcal meningitis (11).

The workup of a patient with recurrent meningitis should include a careful history for head trauma and for any condition resulting in asplenia. On physical examination, a search for cerebrospinal fluid rhinorrhea and otorrhea, sinusitis, otitis media and congenital dermal sinuses should be undertaken. Routine x-rays of the skull and sinuses with laminograms of the cribform plate should be obtained and a radioisotope instilled intrathecally should be assayed for on cotton pledgets placed in the nose. Immunoglobulin and complement levels should be measured and a liver-spleen scan ordered. Even with a meticulous search for the etiology of recurrent meningitis, none may be found only with repetitive testing will the cause become obvious.

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# Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36197 or call (205) 263-6441.

## LOCATIONS WANTED (Physicians interested in locating in Alabama)

**EMERGENCY MEDICINE:** Age 31; University of Mississippi, 1979; seeking practice in specialty in a town with a population of 25,000-100,000. Available for practice July 1980. LW-050180.

\*\*\*

**FAMILY PRACTICE:** Age 49; Emory, 1955; American Board Certified in Family Practice; seeking practice preferably in an out-patient community health clinic with some hospital emergency room work in the Northeastern part or mountainous region 5,000 to 25,000 population. Available June 1980. LW-030180.

\*\*\*

**FAMILY PRACTICE:** Age 51; Cornell University, 1954; American Board Certified; seeking practice in single specialty group, research or institutionally based. Available July 1980. LW-20020.

\*\*\*

**GENERAL PRACTICE:** Age 27; Wisconsin, 1977; American Board Eligible in 1980; seeking practice in industrial, institutional or private or government clinic preferably in the Birmingham area. Available July 1980. LW-020680.

\*\*\*

**GENERAL PRACTICE/INTERNIST/EMERGENCY MEDICINE:** Age 31; Washington University; American Board Eligible in 1980; seeking practice in specialty, multi-specialty, general or emergency medicine preferably near Birmingham and/or Montgomery in a town with a population of 250,000 up to 1 million. Available July 1980. LW-020780.

\*\*\*

**INTERNAL MEDICINE:** Age 32; University of Alabama, 1975; seeking practice preferably in the Mobile area in internal medicine. Available 1980. LW-010280.

\*\*\*

**INTERNAL MEDICINE:** Age 33; Louisiana State, 1976; will be American Board Eligible in 1980; seeking practice in single specialty group, multi-specialty group, or partnership. Available October 1980. LW-20306.

\*\*\*

**INTERNAL MEDICINE/PULMONARY:** Age 35; Prince of Wales, 1969; American Board Certified, seeking practice in general, specialty, associate or institutional in a town with a population of 10,000 plus. Available July 1980. LW-11029.

\*\*\*

**INTERNAL MEDICINE:** Age 31; North Carolina, 1976; American Board Certified in Internal Medicine in 1980; seeking practice in general, including out-patient, in-patient and emergency room care preferably in a moderate to large city, southeastern area. Available in spring of 1981. LW-030380.

\*\*\*

**GYNECOLOGY:** Age 57; Tufts, 1947; American Board Certified; seeking practice in specialty, assistant or associate or group preferably in the metropolitan or suburban areas. Available immediately. LW-060180.

\*\*\*

**OBSTETRICS AND GYNECOLOGY:** Age 29; University of Virginia, 1976; American Board Eligible; seeking practice in specialty preferably in the Southern part in a town with a population of 10,000-25,000. Available September 1980. LW-050380.

**OBSTETRICS AND GYNECOLOGY:** Age 33; University of Texas, 1973; American Board Eligible; seeking practice in single specialty group, multi-specialty group or partnership. Available August 1980. LW-21032.

\*\*\*

**ORTHOPEDICS:** Age 30; University of Missouri, 1975; American Board Certified; American Board Eligible in 1981; seeking practice in specialty in a town with a population over 40,000. Available July 1981. LW-050480.

\*\*\*

**PEDIATRICS/GENERAL PRACTICE:** Age 42; Greiburg, West Germany, 1967; seeking practice in general, specialty, assistant or associate in the central part of Alabama in a town with a population not less than 8,000. LW-020880.

\*\*\*

**PEDIATRICIAN:** Age 29; University of Alabama, 1975; National Board Certified; American Board Certified; seeking practice in single specialty group, multi-specialty group, and/or partnership in a medium-sized or larger town, preferably between 20,000 to 80,000 population. Available November 1980. LW-120279.

\*\*\*

**PEDIATRICS:** Age 29; University of Alabama, 1975; seeking practice in specialty preferably in Birmingham or in a town with a population of 200,000. Available September 1980. LW-010180.

\*\*\*

**SURGERY, GENERAL:** Age 30; University of Alabama, 1974. National Board Certified; will be American Board Eligible in 1980; seeking practice in partnership, single specialty group or institutionally based. Available July 1980. LW-20307.

\*\*\*

**SURGERY, GENERAL-ABDOMINAL:** Age 34; Alabama, 1971; National Board Certified; American Board Certified in general surgery; seeking practice in solo, partnership or multi-specialty group. Available August 1980. LW-20899.

\*\*\*

**SURGERY, GENERAL:** Age 29; University of Alabama, 1976; American Board Eligible; seeking practice in specialty preferably in the Northeast or Southwest in a town with a population of 10,000-25,000. Available July 1981. LW-060280.

\*\*\*

**SURGERY, CLINICAL:** University of Alabama, 1964; American Board Certified; seeking practice in specialty in the Southern section. LW-050680.

\*\*\*

**SURGERY, GENERAL:** Age 34; Mississippi, 1972; American Board Certified; seeking practice preferably in Birmingham or Gulf Coast in a town with a population of 100,000 or greater. Available in the Fall of 1980. LW-050780.

\*\*\*

**SURGERY, GENERAL/VASCULAR:** Age 29; Duke, 1977; seeking practice in specialty in a town with a population of 50,000-200,000. Available July 1982. LW-050880.

\*\*\*

**UROLOGY:** Age 30; Tulane, 1975; seeking practice in specialty in a town with a population of 20,000 and over. Available July 1980. LW-030580.

## PHYSICIANS WANTED (Opportunities for Practice)

**FAMILY PHYSICIAN**—Board Certified, F.P. Residency-trained Family Physician wants same to associate with him in 1981. Prime site in growing residential area of Mobile. Expectations for future expansion to 3-4 person F. P. group. PW-050280.

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**INTERNIST**—Desires part time weekday or weekend position in Birmingham or other North Alabama City. PW-060480.

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**FAMILY PRACTITIONER**—Existing multi-specialty clinic seeks physicians for new satellite clinic in Butler, Alabama. First year guaranteed salary with excellent benefits. Partnership opportunity. PW-050180.

**FAMILY PRACTITIONER**—to associate with Family Physician. An excellent opportunity to establish a group in a new well equipped building located in the growing area of Mobile, Alabama. PW-020180.

\*\*\*

**INTERNIST**—Association with two Internists in hospital and office practice in Montgomery, Alabama. Hospital well equipped with new CCU, telemetry, etc. Board certified preferred. Terms liberal. PW-060280

\*\*\*

**ORTHO, OB-GYN, UROLOGY**—Excellent opportunity available with six (6) F.P.'s and one (1) General Surgeon. Office available. Super hunting, fishing and boating. One hour to Gulf Shores Beach. Diversified industry. Town approx. 7,000 with trade area approx. 15,000. PW-060380.

\*\*\*

**FAMILY PRACTICE, INTERNIST, SURGEON**—Multi-Specialty Group new forming adjacent to hospital. Need Family Practice, Internist, Surgeon. Central Alabama city of 40,000 trade area. Fastest growing area in south. Accredited schools, balanced economy, cultural and recreational opportunities galore. Area lakes for fishing, camping, water sports. Hunting for deer, turkey, dove, quail, squirrel. City of 200,000 15 miles away via Interstate. PW-020480.



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# The Scientist On Himself

CHARLES DARWIN (1809-1882)

My first notebook was opened in July, 1837. I worked on true Baconian principles, and without any theory collected facts on a wholesale scale, more especially with respect to domesticated productions, by printed enquiries, by conversation with skilful breeders and gardeners, and by extensive reading. When I see the list of books of all kinds which I read and abstracted, including whole series of Journals and Transactions, I am surprised at my industry. I soon perceived that selection was the keystone of man's success in making useful races of animals and plants. But how selection could be applied to organisms living in a state of nature remained for some time a mystery to me.

In October, 1838—that is, fifteen months after I had begun my systematic enquiry—I happened to read for amusement Malthus on *Population*, and being well prepared to appreciate the struggle for existence which everywhere goes on from long-continued observation of the habits of animals and plants, it at once struck me that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The result of this would be the formation of new species. Here, then, I had at last got a theory by which to work; but I was so anxious to avoid prejudice that I determined not for some time to write even the briefest sketch of it. In June, 1842, I first allowed myself the satisfaction of writing a very brief abstract of my theory in pencil in 35 pages; and this was enlarged during the summer of 1844 into one of 230 pages, which I had fairly copied out and still possess.

But at that time I overlooked one problem of great importance; and it is astonishing to me, except on the principle of Columbus and his egg, how I could have overlooked it and its solution. This problem is the tendency in organic beings descended from the same stock to diverge in character as they become modified. That they have diverged greatly is obvious from the manner in which species of all kinds can be classed under genera, genera under families, families under sub-orders, and so forth; and I can remember the very spot in the road, whilst in my carriage, when to my joy the solution occurred to me; and this was long after I had come to Down. The solution, as I believe, is that the modified offspring of all dominant and increasing forms tend to become adapted to many and highly diversified places in the economy of nature.

I have no great quickness of apprehension or wit which is so

remarkable in some clever men, for instance, Huxley. I am therefore a poor critic: a paper or book, when first read, generally excites my admiration, and it is only after considerable reflection that I perceive the weak points. My power to follow a long and purely abstract train of thought is very limited; and therefore I could never have succeeded with metaphysics or mathematics. My memory is extensive, yet hazy: it suffices to make me cautious by vaguely telling me that I have observed or read something opposed to the conclusion which I am drawing, or on the other hand in favour of it; and after a time I can generally recollect where to search for my authority. So poor in one sense is my memory that I have never been able to remember for more than a few days a single date or a line of poetry.

On the favourable side of the balance, I think that I am superior to the common run of men in noticing things which easily escape attention, and in observing them carefully. My industry has been nearly as great as it could have been in the observation and collection of facts. What is far more important, my love of natural science has been steady and ardent.

This pure love has, however, been much aided by the ambition to be esteemed by my fellow naturalists. From my early youth I have had the strongest desire to understand or explain whatever I observed—that is, to group all facts under some general laws. These causes combined have given me the patience to reflect or ponder for any number of years over any unexplained problem. As far as I can judge, I am not apt to follow blindly the lead of other men. I have steadily endeavoured to keep my mind free so as to give up any hypothesis, however much beloved (and I cannot resist forming one on every subject), as soon as facts are shown to be opposed to it.

Indeed, I have had no choice but to act in this manner, for with the exception of the Coral Reefs, I cannot remember a single first-formed hypothesis which had not after a time to be given up or greatly modified. This has naturally led me to distrust greatly deductive reasoning in the mixed sciences. On the other hand, I am not very sceptical—a frame of mind which I believe to be injurious to the progress of science. A good deal of scepticism in a scientific man is advisable to avoid much loss of time, but I have met with not a few men, who, I feel sure, have often thus been deterred from experiment or observations which would have proved directly or indirectly serviceable.

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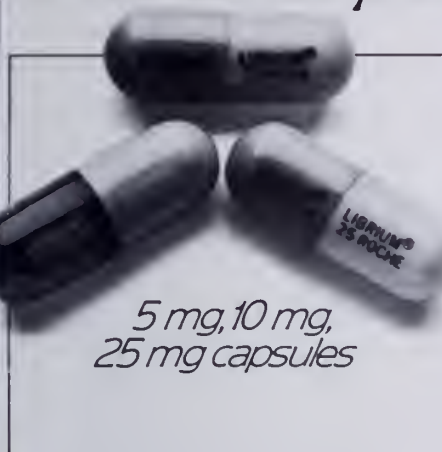
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**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and

acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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